Occidental Medical Times.

Vol. IX. MAY, 1895. No. 5.

AN ADDRESS.

Delivered at the Opening of the Twenty-fifth Annual Meeting of the Medical Society of the State of California, April, 1895.

By G. L. Simmons, M.D., President, Sacramento, Cal.

Ladies and Gentlemen, Members of the Medical Society of the State of California: One year ago, when I received notice of my election as your President, I was in the midst of preparations for a prolonged vacation from the State. A radical change was deemed necessary for my health, and, had I earlier known of a mention of my name in this connection, I should at once have declined the honor, believing that I would not be able to serve you in an acceptable manner. As the selection was had, however, without this knowledge, I felt it to be my duty to accept the position, to somewhat abridge my vacation and to return home with an earnest desire to do all in my power to maintain this State organization of medical men; now the chief representative body of the two thousand practitioners of California. In acknowledging my indebtedness to you for the great honor you have done me by elevating me to this highest office in the gift of my profession, I ask your kind indulgence for any errors I may unwittingly commit as your presiding officer.

The San Francisco Meeting of the American Medical Association.

It would seem proper that I should first refer to the important medical event which has taken place in our State since your last meeting, and towards the success of which a liberal sum was voted from your treasury. The gathering of the American Medical Association in San Francisco last June under your auspices, should be a subject for general congratulation. Not only were members present from all over the Union, in excess of the most sanguine anticipations, but the character of the papers received and read gave to the proceedings an unusual interest, and must secure to such a representative national body an enlarged influence. In accordance with the instructions given to your delegates, it was voted to make no change in the code, a majority believing that "the Ethics of the Fathers" are clear, concise and applicable to the varying conditions of professional life and knowledge. The magnificent entertainments given to members of the Association in this city and the good fellowships engendered therefrom, are also subjects of pride and universal satisfaction. I feel that we should specially recognize the value of the services of a few of our members in first presenting our claims for this national meeting, and in afterwards carrying out the preliminary work essential for its success.

Reasons for Deficiencies in Medical Organization in California.

It is made my duty in the Constitution to address you "upon some subject in harmony with the objects and aims of the Society." I propose, therefore, to offer some practical remarks upon a few topics which have already been discussed by the distinguished gentlemen who have preceded me, but which, in my judgment, so intimately concern our welfare that their reintroduction may not be unprofitable. There are two prominent characteristics of age in physicians who have passed the mid-period of active professional life, which prevents them from being wholly impersonal. The first is to deal largely in retrospection, and the second (from having seen the rise and fall of innumerable supposed systems and specifics for the cure of disease) to lack the essential credulity for unlimited faith in new discoveries in medicine, until time and patiently recorded results and comparisons aid a solution of the important problems. Acknowledging these tendencies in my own case, I need not apologize for a reference to the history of our profession in California. I do this with more confidence because my personal interest in medical science as youth and man about covers the period since the tide of gold seekers literally rushed to the then territory of California, and it is to the peculiar nature of this immigration that I have attributed not only many of the striking characteristics of our present population, but also the presence of these earlier pioneer traits in the medical profession itself, which has no doubt been one of the chief causes for the lack of interest in the fraternal association of its members.

Ever since our first annual meeting in San Francisco, just a quarter of a century ago, we have had the presidential services of men whose unselfish lives and devotion to principle have led them to deplore the want of a fully organized profession; but I believe no one has pointed out the fact that it is probable our feeble cohesive elements resulted from exceptional conditions which were not present in any other section of the American Union. Without question, our immigration was originally composed of representatives from the most active and ambitious elements of the present century. For the first time in history, there was offered to men of every nation a free and untrammeled field for the mining of precious metals. The cost of journey by sea or land to this State, then far removed from the center of population, the courage to face the greatest dangers, the health and youth essential to lead exposed pioneer lives, all combined to bring here an independent and self-reliant people, overwhelmed by the desire for the sudden accumulation of wealth. The ambitions and mental peculiarities of such a population formed a most original field for observation, and the leading traits were certainly those of independence, self-reliance, love of excitement, change, speculation and criticism.

Very naturally the same features were also evident in the ranks of the medical profession. Here were representatives from all the leading medical schools of the world, each having the most unbounded faith in his own methods and education, speaking different languages, with habits and prejudices that had not been worn smooth by the rapidity of international travel and without the refining influence of home life, is it strange that they were restless, impatient of restraint and ready to ignore the qualifications of rival practitioners. To the credit of many of these educated men we should place the fact that they were often the best organizers to develop out of chaotic conditions, the institutions of this State, even if their medical work was marred by personalities and their dignity lowered by aggressive disputations.

Perhaps no better description of the profession as it existed at an early period can be given than that presented by our second President in his annual address. He said: "We are a heterogeneous mass, an army of incompatibles. No country in the world is supplied with physicians so diverse in character. We have all the peculiarities of all the schools in the world coupled with all the peculiarities of all the nations of the world. The physicians of California know less of each other than the physicians of any other land, and they care less for each other. There is no fraternity. Every man is for himself, and thinks the best way to raise himself is by treading down others." With such an arraignment how necessary the first clause of our constitution that our objects are "To encourage the unity and harmony of the profession throughout the State."

From 1850 to 1860, several attempts were made to organize the profession into local and State Societies, but, with few exceptions, efforts in this direction were not a success. A review of the medical literature of that period, however, shows that even under the most unfavorable conditions for study, and amid all the excitements and changes incident to our pioneer life, a fair proportion of the practitioners here applied themselves to original work and investigations.

It should also be noted that many of our members were prominently interested in microscopy and botanical work, and that some of the most serious and important operations ever attempted were successfully performed and reported by the earlier surgeons of California. It is also certain they first demonstrated that the serous cavities of the human body and the larger joints could be successfully invaded by the knife when necessary to preserve life or limb. At this period there were laid the foundations for our medical schools and hospitals which now stand among the best of our educational land-marks. The self-sacrifice of the founders of these institutions, their discouragements and disappointments, their large donations of money, all show the grandest results of individual devotion to medical science.

Since the first decade, in some sections of the State, the value of an organized profession has been recognized and maintained, but in others many practitioners stand aloof from association, and do not see (as stated by your last President, Kenyon) the power of combined effort to elevate the profession and to maintain its influence. How to reach this class who add so little to the sum of medical knowledge, is an important question. In my judgment, much could be accomplished by this Society lending its influence to the formation of small district societies. This could be attained in the same way as has been done by organizers for fraternal and benefit societies. As a practical method in an endeavor to add to our numbers and increase our associated influence, I respectfully recommend the appointment of an officer whose duty should be to visit certain sections of the State and perform the initial work in this field of pioneer isolation and degrading jealousies. Let us so act that the close of this century, so fraught with the grandest discoveries in medicine and surgery, may see us a united profession and in close fellowship with our fellows throughout the world in the saving of human life and the relief of human suffering.

Serum-Therapy.

Since your last meeting, the medical profession every where has been confronted with a question of great importance, involving, as it seems to do, a change in our system of therapeutics more radical than any advocated for many years. In the midst of the polypharmacy of the present day, with an accumulation of supposed remedies, even the names of which tax the best of memories, we witness a revival along bacteriological lines, and see that the evil effects of diphtheria are often controlled by the injection into the circulation of a specially prepared serum. The literature upon this subject is so well known to you, as also the observation of certain cases, that it is unnecessary to refer to this branch of the subject. It may be said, however, that at no time in the history of medical science, have societies like this assembled under a greater pressure of public interest in the determination of a question of a scientific nature. On both continents, the public press is constantly publishing successes to such an extent as to interfere with accurate investigation, and governing boards, that have persistently opposed and neglected the investment of funds for healthy water supplies and proper sewage disposal, are urging appropriations for experiments upon pathogenic germs, often generated by their own neglect of the simplest rules of preventive medicine.

Let us trust that here and elsewhere, the pangs of disappointed hopes raised in many a poor sufferer from tuberculosis may not be repeated in the parents of diphtheritic children. Ready as our profession always has been to examine the claims of any new agent in the treatment of disease, adopting from any source all means which may possibly inure to the benefit of the lives of those entrusted to our charge, may we not also in the case of the new theory, with the State aid for the distribution of antitoxine so recently bestowed, "Prove all things and hold fast to that which is good."

Professional Remuneration.

Of a few subjects of special interest to California practitioners, one of the most important is that relating to compensation for professional work from those who are able to pay for the same. When it is considered that the length of time and expense attending a good medical education have been nearly doubled during the last twenty years, is it not deplorable that the incomes of a majority of physicians have been reduced to such an extent that many are in an impecunious position, and find it difficult under modern demands to balance their receipts and expenditures. While a few practitioners in larger centers have been paid extra fees and have obtained a certain degree of independence, the great mass are held down by poverty. On all sides the services of medical men are underrated, and courts, corporations and beneficiary societies appear to combine to reduce our compensation. The upright judge, who, without a smile, allows probate fees of thousands to young attorneys, haggles over an account of hundreds for medical services which generally involve a night and day attention in the presence of sights and scenes of the saddest and most terrible character. Corporation directors arrange a plan by which thousands of their well paid employes receive in hospitals or private homes the services of the most competent physicians and surgeons at a cost *per capita* so low that its insignificance should never be mentioned as an honest recompense, and a beneficiary society (one of the largest in our State) has recruited its membership upon the representation that doctor's bills will cost the members comparatively nothing.

With facts like these before us, how long will it be before the situation of our practitioners will be analagous to that which now obtains in some European cities, where medical clubs absorb 90 per cent. of the male population, or, as in Birmingham, where it is said competent medical men give their services and medicines at a rate of a penny per head per week. Without any desire to advocate interference with the freedom of individual action in so important a matter, I would respectfully ask, is not this growing custom a blow to equity and justice? In these days of the general recognition of the principle that "the laborer is worthy of his hire," how comes it that the members of that calling who give more to the poor and to communities than all other professions put together, should have the value of their services cheapened, where present returns offer the smallest hope for independence? My own feelings prompt me to say that if medical organizations do not adopt some means to remedy this evil, the profession as a whole deserves to be kept in poverty and to feel the pangs of leaving unprovided loved ones.

Publicity in Professional Matters.

For many years the unwritten law of our profession has prevented its members from contributing articles upon medical subjects to the public press, even when they were smarting under the greatest misrepresentations. Publicity has been considered as belonging to the irregular and charlatan, and as the life career of the honest physician is one of confidence, it has not been deemed possible to attempt even a mild innovation which might lead to a betrayal of such an important feature. As a result of this close policy we find a general misapprehension existing in the United States in regard to the education and methods of what we call the regular medical profession, and this misapprehension, or want of knowledge of truth, has, in my judgment, had much to do with the spread of quackery and irregular practices throughout the Union. Let any one of you lose your identity as a physician (as I have done during the past year) and mingle in general society and I am sure you will be amazed at the statements you will hear as to the practices of your chosen calling.

In all parts of cultivated Europe, government so controls this subject that the same evils do not exist, and the irregular is relegated to his proper position. But here in free America, our people for years have been led into the most erroneous conceptions, and no attempt has been made to publicly explain the true position occupied by the medical profession. The average citizen divides all practitioners into three "pathies," the oldest fashioned of which is allopathy. In vain we say individually that there is no school of medicine in the world that teaches such a "pathy" and no physicians who practice it or allow such a classification, that the name and definition were an invention of Hahnemann for his own purposes, the use of which conveys to the popular mind the idea of exclusive methods and dogmas or an exactly opposite conception to what is true.

Quite early in the history of the American Medical Association, the eminent Dr. Geo. A. Wood, in an annual address as President, made use of the following language on this subject, which certainly embodies the sentiment of the regular profession: "As intelligent men we were taught and have always practised the cure of disease by any and all methods which can be proven to be for the best interests of our patients, and we are bound by no limits other than those of truth and honor. Let us show when the epithet of 'allopathist' is applied to us by others that it is false, inappropriate and offensive, and that the use of it is contrary to gentlemanly courtesy and the proprieties of cultivated society."

Our own State Society years ago passed resolutions in regard to this subject, which was published in our proceedings. As these books are seldom read by the public, no apparent benefit was ever made manifest, and many editors, lawyers, the clergy and citizens generally, still continue the use of the erroneous appellation. Having the fullest faith in the intelligence and fairness of my countrymen, and believing that when the truth is presented in a proper manner, a majority will accept it, I recommend that effort be made to enlighten the public upon the question of the true position of the medical profession, and the relation it sustains to all 'pathies, healers and faith cures.

The Public and Preventive Medicine.

One of the most difficult questions to present to the governing boards of cities and town is that concerning the public health, and few outside of the profession understand, as stated by the best authority, "that so common a disease as typhoid increases in proportion to the saturation of the soil with decomposing organic matter, and decreases in proportion as a city is well sewered and uses only pure drinking water." My object in referring to this particular subject is to emphasize the effort to discuss questions relating to preventive medicine before the public by means of free popular lectures. I believe it to be the duty of each one of us to aid college extension in this direction, and to give to every town the knowledge so necessary to maintain the public health.

Another direction in which our efforts would result in benefit to sufferers from disease, and to our State at large, is in keeping before the people of the whole country the superiority of our climate in many of the gravest affections. While it might appear that this subject has already been presented to the fullest extent by our members and Boards of Health, my opinion is that thousands of eastern invalids are not aware that we have in many portions of our State peculiarly favorable conditions for the open air treatment of consumptives, which do not obtain in other sections. It should be remembered that one of the first causes for the rise and importance of the southern sections of California resulted from the reports on the climate of the coast section made by our first President. During the past winter I have made some personal and comparative observations of the climate of the "Riviera," and it can easily be shown by the meteorological tables of Nice, Mentone or Cannes, that we have a greatly superior climate in winter, while the number of our sunny days are beyond their utmost claims. For climatic reasons alone thousands of Americans still seek this section of the old world, ignorant of the fact that in their own country, hardly five days journey from the Atlantic seaboard, without the risks and annoyances of a longer trip by water, there exists a land of winter flowers, more beautiful and healthy than any in Southern Europe. Dr. R. F. Rooney, of Auburn, has recently published a valuable article in THE OCCIDENTAL MEDICAL TIMES, upon "The Climate of the Sierra Nevada Foothills, and its Influence on Diseases of the Respiratory Organs." The general circulation of such observations as he has been able to make should certainly insure the attention of physicians of the whole country to an extensive section of our State for the relief of patients suffering from genuine asthma, bronchitis or incipient phthisis.

Oliver Wendell Holmes.

In closing this address, I need not apologize for a brief reference to the loss our profession has recently sustained by the death of Dr. Oliver Wendell Holmes. Although to the public he was known, loved and honored for his literary work, among medical men, his real labor was recognized as belonging to medical science. For thirty-five years he acted as full Professor in the Medical Department of Harvard, and in his earlier career, gave to the world a series of prize medical dissertations full of original thought and investigation. If he had done nothing else for medical science than to bring the weight of his mind to the discussion in 1843 of the question of the communicability of puerperal fever from one patient to another by the "accoucheur," that one effort to establish a theory, now everywhere acknowledged to be correct, and which has saved the lives of many mothers, entitles him to the gratitude of the entire profession.

As a professor of anatomy, he was recognized as prominent long before his abilities in general literature had shown upon the world. In the earlier efforts to develop the study of microscopy, Holmes was most active and original. Although at that time exercises in this department were not required by the faculty, his interest was so great that he formed classes for private instruction at his home on Montgomery Place, and I well remember the enthusiasm with which he related the fact that his object-glass was of Americam manufacture and had been taken to Europe by Dr. Burnett who, after challenging comparisons, had found it to be superior to any then known in the world. In connection with his earlier work in microscopy, attention has been called in the *American Microscopical Journal*, by Dr. Ephraim Cutter, now of New York, to the fact that Holmes then taught the use of the instrument with direct illumination. The professor having an arrangement of his own—a six inch black disk fastened to the tube and graduated so that turning the disk would act as a fine adjustment.

With such a professional record, and while his name is being honored by laymen in Europe as well as in America, is it not most fitting that medical organizations, even on the shores of the Pacific, should not allow the brightness of his fame as poet and novelist to obscure the labors of years for medical science of a man, spoken of in a late number of the *British Medical Journal* as "one of the most lovable and notable figures of modern medicine."

Apart, however, from his position of medical author and professor, we owe to Holmes a debt of gratitude for his constant desire, evident in his general literary work, to place the profession of medicine in its true position before the public. His keenest satires and vigorous treatment against charlatanism and irregular medicine may be found in connection with his most highly prized papers in literary magazines of the day. In him the good doctor always spoke, although often under the name of "Autocrat" or "Professor." Without exception, the medical students who listened to his teachings carried through their lives a continual interest in what has been called his delightful personality, and his genial medical wisdom, interspersed throughout his writings, has done much to enliven the paths of these "toilers who have no rest"—the overworked practitioners.

In 1860 Dr. Holmes delivered an address before the Massachusetts Medical Society, entitled "Currents and Counter Currents in Medical Science," afterwards published with an essay upon "Homeopathy and Kindred Delusions, and the Four Topics of 'The Weapon Ointment,' the Tar Water Mania of Bishop Berkeley—the Royal Cure of the Scrofula, and the History of Perkins' Metallic Tractors." All, as the author says, "published to illustrate the ease with which numerous facts are accumulated to prove the most fanciful and senseless extravagances." If this work could be placed in the hands of the people to-day there would be less quackery and fewer delusions. On the tenth of last October, it was my privilege to stand by his open grave in the beautiful cemetery of Mount Auburn, and to pay silent worship to all that remained of the great man always in fellowship with youth, who, forty years before, had received me as a struggling medical student from the Pacific coast. In common with others, I am sure that his kindly encouragement made easy a most difficult path. Truly he deserved a cheerful and serene old age, and a place among "modern immortals."

> "In love he practised, and in patience taught,
> The sacred art that battles with disease;
> Nor stained by one disloyal act or thought,
> The holy symbol of Hippocrates."

ABSTRACT OF THE REPORT OF THE COMMITTEE ON CLINICAL MEDICINE.

Of the Medical Society of the State of California, April, 1895.

By DAVID POWELL, M.D., Chairman, Marysville, Cal.

Malaria: Its Cause and Its Effects.

The speaker said: The title of this committee, "Clinical Medicine," clearly indicated that the Society desired a practical consideration of the phenomena of diseases based on useful lines, rather than an elaborate treatise founded on experimental or theoretical conclusions. He therefore desired to present the subject of "Malaria: Its Cause and Its Effects," with special reference to the forms most frequently encountered in this State.

Two of the most important achievements in pathology of modern times were the almost simultaneous discoveries of the bacillus tuberculosis by Koch, and of the plasmodium malariæ by Laveran. The former was received with the greatest enthusiam and *eclat* by the profession in every part of the world; the latter created scarcely a ripple of excitement, and, until very recently, attracted but little attention, either in this country or in Europe. Yet, viewed from a practical standpoint, the discovery of Laveran is infinitely the greater. The bacillus tuberculosis is said to cause one-seventh of the total mortality of mankind—the malarial microörganisms, directly and indirectly, not less than one-half.

The study of malaria is therefore interesting upon theoretical grounds alone, while, from a clinical point of view, there is scarcely a disease that assumes a greater practical importance; for, notwithstanding the assertion of Osler, that malarial fever is rare on the Pacific coast, we are forced to admit that it prevails, especially throughout the great interior valleys of the State, to an extent and with a persistency true of no other disease. Among the prevailing diseases reported to the Secretary of the State Board of Health during the past year from different localities in the State, representing only a small percentage of the total population, the number of cases of malarial fevers outnumber those of pneumonia and typhoid fever more than twofold. While these reports do not furnish sufficient data upon which to base even an approximate estimate of the actual number of cases treated, they indicate the wide-spread existence of paludal fevers in this State; and the possibility is suggested, in the light of recent etiological investigations, of their diminishing prevalence in the future by the employment of proper prophylactic measures.

The erroneous theories which prevailed, until within the past few years, of the pathology of malaria rendered the study of the prophylaxis of the diseases attributed to it, to a great extent unprofitable. Until the description by Laveran of the malarial parasites found in the blood of persons affected with paludal fever, the highest medical authorities, while some admitted the possibility of the existence of malarial microörganisms, were agreed that nothing definite was known of the physical or chemical characters of the malarial poison. Yet, from the time when medicine was first practised as an art by the priest physicians in the temples of health of ancient Greece down through all the ages, various hypotheses have been advanced which were believed by different observers to account for the etiology of the periodic fevers. These theories in the light of present, more accurate knowledge of the nature of malaria, are perhaps somewhat amusing, some of them even absurd, but they serve to illustrate how long and tedious, how beset with difficulties, is the pathway of the investigator in his efforts to fathom the occult qualities of disease, and how many centuries of untiring research are often occupied in the elucidation of a single scientific truth.

The alleged discovery by Klebs and Tomassi-Crudelli, and more recently by Professor Freire, of Rio Janeiro, of a bacillus malariæ has not been confirmed, while the testimony of many competent observers who have demonstrated the constant presence of the plasmodium of Laveran in all forms of malarial diseases is convincing; and it is now generally conceded that these pathogenic organisms are the specific cause to which the morbid phenomena of malaria are due. Unfortunately, however, "our knowledge of these malarial parasites has thus far not added scientific accuracy to the study of prophylaxsis. We do not know where or in what form the pathogenic organisms exist outside of the body, nor have we exact ideas as to their mode of entrance."

Since the term malaria—signifying atmospheric contamination—is by common consent adopted as the name of the special poison which produces paludal fevers, the introduction of pathogenic germs through the respiratory passages would be naturally inferred; and many still hold that the air, laden with the malarial poison, is the principal medium of infection. There is much reason to believe, however, that the causative microörganisms of these diseases oftener find entrance into the system through the alimentary canal, and that malaria is, in a very large proportion of cases, essentially a water-borne disease.

Laveran, in his classical work on Paludism, says: "Numerous facts tend to prove that the infection may take place through drinking water, and that persons who have contracted paludism (malarial fever) have almost always made use of water of palustral (with humid or marshy soil) localities." And in support of this statement he says further: "It has been found repeatedly that in the same localities, among persons living under the same conditions, but drinking water from different sources, some were attacked by palustral fever while others escaped. In certain localities, which were formerly insalubrious, it has been sufficient to place pure water at the disposal of the inhabitants, instead of the stagnant water which was formerly used, for palustral fever to disappear; and in localities otherwise healthy, people may contract fever whose drinking-water comes from unhealthy localities, and the persons most exposed to infection in these conditions are those who consume the most water." Again: "Travelers passing through unhealthy countries often succeed in escaping fevers by only drinking water that has been boiled, while people who do not take that precaution suffer severely."

Parkes also, in his Manual of Practical Hygiene, cites many instances wherein it was conclusively shown that malarial fever resulted from the use of contaminated water. Dr. Russell, of the Bengal Medical Service, states, as a result of his personal experience during seven years observation in one of the most intense malaria-producing regions of India, that he is "convinced of the marked immunity from malarial affections enjoyed by persons who, though living continuously in this typically malarious region, yet carefully avoid introducing the miasm into their system by their drinking water."

It is well known that the Chinese on this coast enjoy a remarkable freedom from malarial and enteric fevers. Though many of them live in most unhealthy localities, and though their habitations are invariably surrounded by the very worst sanitary conditions, they rarely suffer from these diseases; a fact attributable, I think, solely to their tea-drinking propensity.

As the usual source of infection in enteric fever is admittedly the presence of the typhoid bacillus in potable water, so the experience and researches of so many careful observers, the number of whom might be multiplied almost indefinitely, lead to the conclusion that the specific poison of malaria finds access into the system through the same medium. But it cannot be said at this time that the question is determined. Quite opposite views have been expressed upon the subject by equally creditable authorities, and more exact knowledge concerning the mode of infection must be acquired before all that is desirable can be accomplished in the way of prophylaxis.

From the wide-spread prevalence of malaria in this State, it is evident that little has been attempted so far in the way of adopting means for its elimination; yet intelligent and persevering efforts in this direction would unquestionably lead to very great improvement, if not the extermination from many a fertile plain and valley of a serious and preventable disease. As some one has aptly said, "Science has enabled us literally to place our finger upon this enemy of our race, and why should we hesitate to crush it?" It is true that we do not here often encounter the grave types of paludal fevers that are endemic in the southern and southwestern States. In my experience cases of pernicious malaria in California are rare; and the more severe forms of malarial diseases are not so common as they were in the early settlement of the State. At that time, as many of you can bear witness, among the pioneer and sturdy throng which dwelt along the banks of the Sacramento and San Joaquin rivers and their tributaries, few escaped an attack of intermittent or remittent fever; and the number of unmarked graves, where rest the remains of those adventurous argonauts, who, in their feverish delirium, gathered phantom nuggets of gold, and who finally succumbed to the inevitable, will never be known. In marshy districts along the coast also, and upon the water-front in San Francisco, where the first settlers pitched their tents, these diseases were not infrequently observed. Since that time many changes in our environments—including cultivation of the soil, improved sources of water supply, the rapid growth of cities and towns, etc.—have modified, to a great extent, the intensity of the malarial poison; and yet, in many communities, it still finds numerous victims.

Malarial Intermittent Fever: In this State the forms most commonly encountered are the quotidian and tertian types of intermittent. After a period of incubation, varying from 4 to 15 days, during which there is experienced more or less severe prodromal symptoms relating mainly to the nervous and digestive systems, a paroxysm occurs, the three stages of which following each other in orderly sequence and succeeded by complete apyrexia are pathognostic of its malarial origin. If we add the therapeutic test of the cinchona alkaloids, every doubt in diagnosis is usually removed; for, as Osler says, "If the practitioner will take to heart the lesson that an intermittent fever which resists quinine is not malarial, he will avoid many errors in diagnosis."

Malarial Remittent: Next in order of frequency on this coast, are the remittent and continued fevers. Indeed, during the autumn months they are even more prevalent in some localities than the intermittent type, from which they differ mainly in the duration of the fever and the absence of complete intermissions between the paroxysms. Etiologically, they are identical, and the distinguishing clinical features of remittent fevers are usually ascribed to great individual susceptibility and to the intensity of the malarial poison. It is not improbable, too, that the continued character of the fever may be attributed to the constant presence in the blood of the malarial microörganisms in various stages of development. The discovery of Laveran has made clear many obscure points regarding malarial-continued fevers, particularly with reference to diagnosis. Their early discrimination from other forms of continued fevers, including typhoid, "is one of the most valuable results of modern clinical investigations." In every case, an accurate and definite diagnosis can be made through the examination of the blood.

Typho-malarial Fever: Under this title is incorrectly classed a form of remittent fever—not infrequently observed in this State—which does not yield readily to treatment, and in the course of which certain adynamic symptoms are developed. The word was introduced by Dr. Woodward, of the United States Army, during our civil war, and, as he says, was not intended to designate a "specific and distinct type of disease, but is simply a term which is conveniently applied to the compound forms of fever which result from the combined influence of the causes of malarious fevers and of typhoid fever." Properly used, therefore, it designates a mild form of enteric fever with malarial infection, and cannot be classed among paludal diseases; but the term is so often applied to adynamic forms of remittent fever, and its use in that connection is so misleading, that its exclusion from our nosological tables would avoid confusion, and would be in the interest of accuracy in nomenclature.

Malarial Cachexia: The effects of chronic malarial poisoning are familiar to physicians residing in malarious districts. The striking features of this condition—the saffron-yellow skin, edema of the extremities, shortness of breath and palpitation upon slight exertion; the excessively enlarged spleen, and the frequent hemorrhages—are indicative of grave constitutional disturbances, and symptoms threatening life are often present.

Treatment: While seldom any immediate injurious and serious results follow an attack of simple intermittent fever even without treatment, much may be done during the febrile paroxysm, not only to lessen discomfort, but to guard against subsequent complications and sequelæ. It is, moreover, a common observation that these cases, if not checked by prompt and appropriate treatment, may soon assume an irregular type and become merged into the continued or remittent form. If the patient is seen at the beginning of the attack, the physician's attention is first occupied in efforts to abort the chill; or, failing in that, in the employment of such measures as will tend to abridge the cold stage. A subcutaneous injection of an eighth or quarter of a grain of morphine with $\frac{1}{60}$ of a grain of atropine is usually effective. Warm external applications also, by means of hot water rubber bottles to the back and extremities, have a tendency to lessen the duration of the rigor and to alleviate the distressing symptoms. The interior bodily heat being already increased, I never could see the utility of administering hot drinks as usually recommended. As the hot stage advances, much relief is experienced from sponging the body with cold water, the application of cold compresses over the temples, and, if the headache is severe, of the ice-cap to the head. During this stage I usually prescribe, and, I think, with much benefit, the following mixture:

℞—Morphinæ Acetatis	gr. i
Tr. Aconit.	m. x
Liquor. Ammon. Acetatis	℥ iv.—M.

Sig.—Take a dessertspoonful every hour till fever subsides.

To this, if there are present distressing nervous symptoms, the addition of 15 to 20 grains of potassium bromide to each dessertspoonful exerts a remarkably quieting and soothing influence. With the beginning of the sweating stage, the temperature rapidly falls, and the specific treatment should be at once commenced. There has been much difference of opinion regarding the best time for the administration of quinine in the treatment of intermittent fever. Clinical observations have shown that the best results are obtained when it is given during the period of apyrexia, and the experiments of several careful investigators who have observed the destructive effect of quinine upon the plasmodium of Laveran, have demonstrated that the malarial parasites in different stages of development vary in their resistance to this drug, and that the period of their greatest sensibility is between the paroxysms. Its exhibition, therefore, during the period of febrile intermission is not only in accord with clinical observation, but also with the theory of its therapeutic action. That the use of the cinchona alkaloids during pyrexia often produces unpleasant and even dangerous effects, as formerly taught, may be denied, but their influence in preventing a recurrence of the paroxysm when so taken is greatly diminished. In uncomplicated cases the advent of the sweating stage is sufficient to indicate that the fever is subsiding, and 10 grains of quinine in solution or in capsules should be administered, and the same quantity repeated once or twice during the following 12 or 18 hours. This will invariably check the paroxysms, and a daily dose of 15 to 20 grains repeated at intervals for the subsequent three or four days will prevent their return. Once the attack is broken tonics are indicated to restore the patient's strength and improve the impoverished condition of the blood. For this purpose I have found satisfactory results from Fowler's solution of arsenic in combination with the ferrated elixir of calisaya—quinine to be resumed upon the first indication of febrile recurrence—and a full dose 15 to 20 grains given every seventh day for several weeks to prevent relapses.

The speaker did not believe in the alleged oxytoxic properties of quinine. He said: When we bear in mind how often abortions and miscarriages are caused by malarial diseases we should not hesitate in the presence of the toxic effect of paludism to administer quinine in any stage of pregnancy, and I believe that in many instances these accidents are prevented by prompt and efficient doses of this agent. At the outset of an attack of malarial fever a mild purgative is often required, as constipation is usually present and the alvine secretions more or less vitiated. This, however, should not interfere with the specific treatment; preparatory treatment, so-called, is not necessary. I am aware that it is still the custom of many physicians practising in malarious districts to prescribe calomel and blue pill in the treatment of periodic fevers; but I believe they are usually unnecessary, and often positively injurious; that patients do equally well, if not better, when mercurials are wholly avoided. The treatment of other forms of malarial diseases does not differ materially from that of the intermittent type. Simple remittent fever yields promptly to quinine, given in efficient doses either in capsule or by hypodermic injection during the remission. Persistent vomiting should be relieved by counter-irritation over the stomach, milk in small quantities with carbonated water or lime water, and, if severe, by subcutaneous injection of morphine and atropine. The remissions may often be hastened, headache and delirium relieved and high temperature reduced by cold sponging, tincture of aconite given in small, frequently repeated doses, and phenacetin, 5 to 10 grains every two or three hours.

The therapeutic sensation of the year has been the prominence which bacterio-therapy has attained, and its employment in diphtheria and other diseases. The introduction of animal extracts prepared from different organs and tissues is also a prominent feature in modern therapeutics; and while I would not say that their use as curative agencies is analogous to an attempt, as Dr. Butler, of Chicago, remarked in a recent address, "to increase the weight and fibre of a tree by manuring it with sawdust," yet it cannot be said that their efficacy has been determined. Very recently the exhibition of certain organic products has been highly commended in the treatment of malarial anemia and other anemic conditions, and among the novelties in this line which the past year has produced are bone marrow, hemalbumin, hemol and ferratin.

In no branch of the medical science has there been more commendable progress of late years than in the art of therapeutics; and while conservatism should always temper the enthusiasm which the discovery of new remedies inspires, their employment should neither be condemned without investigation nor accepted without proof of their utility founded upon sound logical deductions, and established by the test of clinical experience. Meanwhile, "*in medio tutissimus ibis.*"

ABSTRACT OF THE REPORT OF THE COMMITTEE ON SURGERY.

Of the Medical Society of the State of California, April, 1895.

By R. A. McLean, M. D., Chairman, San Francisco, Cal.

The Superiority of Amputation Over the So-called Conservative Methods of Treatment of Tubercular Disease.

The speaker said his remarks were intended to apply only to cases of unusual severity. It was not contended that amputation should be done except in such aggravated examples as offer no prospect of gaining a comfortable degree of activity after iodoform injection, resection, excision, partial amputation, and the use of orthopedic apparatus. To those who see much of the effects of conservative treatment of joint affections and clubfoot it must be evident that better results would be attained by amputation in many cases which seem to be suitable for milder methods of treatment. In selecting the method of treatment the surgeon should be governed by the desire to secure to his patient the greatest degree of activity, and not by the desire to sacrifice only the smallest possible part of the extremity.

The modern artificial leg supplies to a wonderful degree the place of the natural extremity, and affords greater activity and comfort than can be obtained by more conservative methods in these cases. Owing to the mechanical perfection of this device, as well as to its unobjectionable appearance, the surgeon is now justified in advising amputation rather than the procedures before referred to. Amputation through the foot should be restricted to the operations of Lisfranc and Hey. Chopart's amputation should be discarded, owing to the tendency of the anterior surface of the stump to become depressed by the unopposed action of the tendo-achillis in drawing the heel upward. The effect of this displacement is such as to render the adjustment of an artificial foot difficult and unsatisfactory. The subastragaloid amputation and the operation of Pirogoff possess no advantage over that of Syme, and give less space for the mechanism of the joint forming the ankle of the artificial foot. The difficulty of securing motion at the situation of the ankle would also exclude the various modifications of these amputations, as well as the operation known as the osteoplastic resection for disease of the posterior tarsal bones.

For the correction of severe forms of talipes varus, the operation of tarsectomy has recently been extensively practised. In many cases the immediate result appears to be satisfactory, but after a few months there is a great tendency to relapse. The shortening of the foot and stiffening of the ankle and the medio-tarsal joints renders this operation a doubtful substitute for amputation. In the treatment of extensive tubercular disease of the ankle, amputation offers a speedier cure than resection, and the activity of the patient will certainly be greater than would follow the retention of an anchylosed or insecure joint. In neglected cases of tubercular disease of the knee-joint, with subluxation backward of the tibia; it is possible to place the leg in extension only after removing a considerable portion of the lower extremity of the femur and head of the tibia. The resulting shortening and anchylosis greatly hampers the activity of the patient. Resection of the knee-joint should be preferred to amputation only in cases confined to the synovial membrane and cartilage, and not complicated by extensive disease of the bone or subluxation of the tibia. In tubercular disease of the hip-joint, excision of the head of the femur, incision and curetting of the synovial sac and cartilage, or tunnelling of the trochanter and neck, will, in cases not far advanced, often effect a cure without resulting in serious impairment of function. Such operations, however, do not meet the requirements in the more severe cases.

The usual incision is insufficient to give access to all of the suppurating tissues, and its position is not favorable for drainage. The extent of the caries of the shaft of the femur necessitates a section usually some distance below the trochanters. It is difficult to deal thoroughly with intrapelvic abscesses and caries of the ilium through the usual incision for exsection. Convalescence is tedious, and suppurating sinuses are almost certain to remain. The remnant of the extremity is unserviceable by reason of the flail-like attachment to the pelvis; or, if bony anchylosis occurs between the femur and pelvis, the excessive shortening necessitates a high patten under the foot. Finally, the prolonged confinement and the difficulty in maintaining asepsis frequently produce complications which prove fatal. It is in such cases that amputation at the hip is especially indicated. It is generally conceded by surgeons that patients suffering from chronic joint disease bear amputation well, if but little blood be lost. Until recently hip-joint amputation was a bloody operation; but, owing to the labors of Wyeth, Senn and others, we now have the means of avoiding hemorrhage almost entirely. In order to get better access to the ilium I have used the elastic tube in the form of a figure-of-8 bandage around the thigh and pelvis, crossing the turns of the tube on the crest of the ilium. In thin patients this arrangement of the tube when drawn tight will compress all of the vessels passing from the pelvis to the flaps.

The speaker said: During the past year the clinic at the City and

County Hospital had furnished seven cases of amputation at the hip. The histories of these were then detailed, several having been preceded by other operations of a conservative character. Some of the cases were exhibited to the Society. A case of paraplegia, following a depressed fracture of the laminæ of the three lower dorsal vertebræ, was also shown. This patient would not at first submit to operation, and it was several months before the posterior arches of the two upper lumbar vertebræ which were pressing on the cord were removed. In spite of every means the case had only been slightly benefited. The speaker ventured to suggest that in this case a double amputation through both thighs would greatly increase the patient's range of activity.

ABSTRACT OF THE REPORT OF THE COMMITTEE ON STATE MEDICINE AND HYGIENE

Of the Medical Society of the State of California.

W. R. CLUNESS, M.D., Chairman, San Francisco, Cal.

Public Hygiene.

The speaker said: Gratifying progress has been made within the past year in public hygiene in several important particulars. The discovery of a specific bacillus causative of the plague by Dr. Kitasato, of Japan, was announced in August last. From various quarters there is evidence that health authorities are active in urging preventive measures for limiting the spread of tuberculous diseases. The Michigan State Board of Health has resolved to ask legislation to prohibit any one from acting in the capacity of a teacher or professional nurse without a certificate from a reputable physician of freedom from tuberculosis; also prohibiting the sale of milk from cows not proved exempt by the tuberculin test. Dr. Schweringer, State Health Officer of Texas, has issued a circular to county physicians and health officers urging enforcement of recognized measures for the restriction of pulmonary consumption, with special reference to the hotels in southwestern Texas, which are resorted to by invalids.

Since the discovery of the bacillus tuberculosis, pulmonary phthisis has materially declined in Germany, as shown by the following figures: At Munich from 40.8 deaths per 10,000 of population in 1883 to 30.8 in 1893; at Berlin it was 34.7 in 1883, and 25.7 in 1893; at Vienna the mortality has fallen off from 69.29 to 47 per 10,000 inhabitants. A corresponding reduction has been observed at Frankfort, Dresden, Stuttgart and other cities. All this is attributable to local and personal hygienic precautions.

Perhaps the most noteworthy advance in curative medicine during the past year is the antitoxine treatment of Behring and Roux for diphtheria, by the subcutaneous injection of blood-serum of horses rendered immune by successive injections of the virus in increasing strength. This naturally led to experiments on human beings with the serum in order to render them insusceptible to diphtheria; but so far it appears that the immunity thus conferred lasts only about six weeks. Similar experiments have been made for the prevention of cholera with a so-called anti-cholera vaccine. It is said that Dr. Haffkine has inoculated over 25,000 persons in Northern India, giving them complete protection. As immunity is not gained by one attack of cholera, so with diphtheria, we can hardly expect the protection conferred by the inoculation to be permanent.

During the past year small-pox has manifested unusual prevalence throughout the country east of the Rocky Mountains, indicating another cycle of activity, and, in my judgment, we have reason to apprehend the same experience on this coast. Since its disappearance about seven years ago material for its ravages has rapidly accumulated from neglect of vaccinating the children born since that date. It is greatly to be regretted that this protection is generally deferred until children are old enough to be sent to school, and then many persons seem to have conceived the notion that the only occasion for vaccination of children is entrance to public schools. Thus the liberty of having and communicating contagious disease seems to be one of the blessings of government by the people—a privilege denied by the stricter governments of Europe.

Medical Education.

It is gratifying to observe that the two medical colleges of San Francisco have determined from this time to require four annual graded courses of lectures as a requisite for graduation, and it is to be expected that the Medical Department of the University of Southern California will soon fall into line with other first-class medical schools of the country. When we recollect that less than twenty-five years ago no medical school in the country required attendance on more than two courses of lectures, and these not graded, we have reason to be satisfied with the present advance in the standard of professional attainments.

The organization of an Army School of Medicine by the new Surgeon-General, Sternberg, in which public hygiene forms a prominent branch of instruction, deserves unqualified praise. It is to be hoped that medical officers on entering the other two branches of our public service (the Navy and the Marine Hospital Service) may before long have the benefit of similar training. Thus within a few years the government would have at command a body of sanitary experts, and would be able to spare details for emergencies wherever needed, at home or abroad. It has been proposed by some one in the East, whose name I do not recollect, to afford post-graduate instruction in hygiene, and some degree or certificate attesting proper qualification to physicians who contemplate pursuing sanitation as a specialty. This proposition might suit his latitude and longitude, but speaking for California from long observation, I should say that in such an institution a chair of the Theory and Practice of Politics would be indispensable and would form the most important part of the outfit.

Our Insane Asylums

These institutions have received so little attention from the Committee on State Medicine for a number of years that I have thought it proper to make some remarks about them. Accordingly the following list of inquiries was forwarded to the Superintendents of each one of the five State asylums:

1. Is due attention paid to the legal requirements that the property of the insane should be used for their support when it can be made available?

2. Are there chronic insane persons in asylums who could be safely cared for in county almshouses? If so, is this number large or small?

3. Are the insane put to work when found adapted? If so, what occupations are given them? Could the number thus employed be much increased? Would such increase, if practicable, conduce (and in what degree) to the welfare of the insane and economy to the State?

4. Are inmates classified and kept in separate quarters? Does overcrowding interfere with classification? If so, how?

Replies were received from all of the asylums except that of Napa. Opinions on the first question seemed divided, the majority believing that sufficient care was not employed. The answers to the second question indicated that there were a number of chronic insane patients in the asylums, but that they were better and more economically cared for than in county almshouses. In reply to question 3 it was unanimously stated that employment was furnished as far as possible. The replies to question 4 indicated that proper classification was well nigh impossible owing to the very crowded condition of all the asylums. From the foregoing the speaker drew the following conclusions:

1. It appears to be the duty of the Judge in making the commitment of the insane person to an asylum to inquire into his ability or that of his legal custodians to bear the expense of his maintenance,

and it further appears that this duty is neglected. There is a large number of people who have no scruples in becoming public charges, or in throwing their relatives and dependents on the public in such ways as receiving gratuitous relief in public dispensaries, hospitals and asylums, and in enjoying pensions from the national government; and the abuse of charity intended for the needy only, is a burden difficult of avoidance. It is quite probable that the New York plan of making each county responsible, in whole or in part, for the maintenance of its insane in State asylums would go far to correct this abuse; for county Supervisors are always closely watched by taxpayers.

2. It is doubtless true that chronic lunatics, as well as the violent insane, can be more efficiently and economically cared for in large institutions than in small ones; but it is also evident that the room in our State asylums is largely occupied by demented subjects who need scarcely any restraint or treatment, and to whom work in the open air of our genial climate would be a benefit. It has already been proposed to house this large class in inexpensive cottages, instead of overcrowding the palaces which seem to have been constructed rather for architectural effect and the disbursement of public funds for local benefit than for the relief of diseased and needy persons; and if at the same time suitable industrial employments could be furnished a manifold advantage would ensue.

3. It is apparent that the importance of giving manual occupation to such insane patients as are adapted to it is recognized by all who have answered the inquiries, though they do not fully agree upon the method of carrying out the measure further. For reasons already stated, it seems to me that extension of this measure should be in the direction of agricultural work for men, and for women such work as will not deny them abundance of fresh air and direct sunshine, as far as practicable.

4. The advantage of systematic classification is admitted on all hands, but it is generally alleged that overcrowding is an insuperable obstacle. One only answers that this does not particularly interfere with classification, provided the number of wards is sufficient to care for each class. This suggests the inquiry, why then were not separate wards enough allowed in the original plans of the buildings before they were erected? Classification is no novelty in asylum management; neither is overcrowding a new experience. Three of our largest asylums are located at no great distance from large centers of population, and some discrimination might be exercised in the distribution of cases so as to favor classification.

It may be proper to advert to the bill recently introduced before our Legislature, and defeated, for the formation of a single governing body for all the asylums, instead of separate boards. It is probable that the reasons alleged in the Governor's special message and in some of the newspapers were not considered convincing by the Legislature in the light of eastern experience. In Massachusetts the plan of vesting the control of details of administration in a central board was rejected at the outset; while its adoption in New York has conduced more to vexatious obstruction in obtaining necessary supplies than to economy.

It is the province of the Board of Examiners already provided to keep expenditures within the limits of reason and the law; and, in general, faithful performance of existing laws is more needed than new legislation. It is indeed desirable that there should be a degree of uniformity in the management of our asylums, having for its object the recovery and general welfare of the insane, rather than supervision of the purchase of supplies; but it is questionable whether a single controlling authority, even for the former object, might not result more in friction among officials than in benefit to disordered intellects. Advice is sometimes better than command when authorized by law; and coming from a responsible source it is likely to be heeded.

It seems to be generally overlooked that Article 2979 of the Political Code empowers the State Board of Health to "act as an Advisory Board to the State in all hygienic and medical matters, especially such as relate to the location, construction, sewerage and administration of prisons, hospitals, asylums and other public institutions." Many of this Society may recollect that our State Board of Health has twice succeeded in obtaining passage by the Legislature of a bill giving it an Inspector, one of whose duties it would be to afford the necessary information for guidance in the discharge of this function; and may remember that the Governor in both instances objected on the ground of economy, though approval was given to creating the place of legal advisor to the Board at the same cost. While economy at present is so much in demand in our State affairs, it is noteworthy that this kind of oversight, already contemplated, but not adequately provided for in the Code, would be the least expensive solution of the problem, and probably as satisfactory as any.

ABSTRACT OF THE REPORT OF THE COMMITTEE ON MEDICAL JURISPRUDENCE

Of the Medical Society of the State of California, April, 1895.

By G. F. SHIELS, M. D., Chairman, San Francisco, Cal.

A Few Remarks on the Status of the Medical Expert Witness.

The speaker said: The laws governing a witness as to fact and an expert or opinion witness were widely different. A witness as to fact is one who sees, hears, or knows either actual facts connected with the case at issue, or facts from which legal inferences applicable to the case may be drawn. This witness must give evidence when called upon, and should he refuse to answer questions which the Court rules proper to be answered, he is liable to punishment for contempt of Court. The expert witness is one who, through especial study or experience, is particularly instructed in some art or trade, and may give his opinions on questions of science or skill relating to such art or trade. It can, therefore, be readily understood that a medical man, when called upon to give opinion evidence connected with his profession, is an expert witness. This is generally understood and recognized, and it is a common practice for lawyers to introduce such experts in trials where their opinions may be of value to one or other of the contesting parties.

The first phase of the question to which I will direct your attention, is the following:

1. Can a medical expert be subpened and forced to give opinion evidence without being paid a fee, and, should he refuse to give such evidence, can he be held to be guilty of contempt of Court?

2. Can a medical man, when subpened as a witness as to fact, during his examination, be forced to give opinion evidence without being paid a fee, and, should he refuse to give such evidence, can he be held to be guilty of contempt of Court?

In civil cases these questions rarely arise, since the attorneys usually call upon the witness and make a definite business arrangement with him regarding his fee, but, in criminal procedures, it would seem a common source of misunderstanding and trouble.

The common law of England, which, modified by statutes, is the law of the various States of the Union, has clearly established the fact that the scientific or expert witness must be paid; and Mr. Justice Maule said, in the case of Webb *vs.* Page, where this point was at issue: "There is a distinction between the case of a man who sees a fact and is called to prove it in a court of law, and a man who is selected by a party to give his opinion on a matter on which he is peculiarly conversant from the nature of his employment in life.

It may be proper to advert to the bill recently introduced before our Legislature, and defeated, for the formation of a single governing body for all the asylums, instead of separate boards. It is probable that the reasons alleged in the Governor's special message and in some of the newspapers were not considered convincing by the Legislature in the light of eastern experience. In Massachusetts the plan of vesting the control of details of administration in a central board was rejected at the outset; while its adoption in New York has conduced more to vexatious obstruction in obtaining necessary supplies than to economy.

It is the province of the Board of Examiners already provided to keep expenditures within the limits of reason and the law; and, in general, faithful performance of existing laws is more needed than new legislation. It is indeed desirable that there should be a degree of uniformity in the management of our asylums, having for its object the recovery and general welfare of the insane, rather than supervision of the purchase of supplies; but it is questionable whether a single controlling authority, even for the former object, might not result more in friction among officials than in benefit to disordered intellects. Advice is sometimes better than command when authorized by law; and coming from a responsible source it is likely to be heeded.

It seems to be generally overlooked that Article 2979 of the Political Code empowers the State Board of Health to "act as an Advisory Board to the State in all hygienic and medical matters, especially such as relate to the location, construction, sewerage and administration of prisons, hospitals, asylums and other public institutions." Many of this Society may recollect that our State Board of Health has twice succeeded in obtaining passage by the Legislature of a bill giving it an Inspector, one of whose duties it would be to afford the necessary information for guidance in the discharge of this function; and may remember that the Governor in both instances objected on the ground of economy, though approval was given to creating the place of legal advisor to the Board at the same cost. While economy at present is so much in demand in our State affairs, it is noteworthy that this kind of oversight, already contemplated, but not adequately provided for in the Code, would be the least expensive solution of the problem, and probably as satisfactory as any.

ABSTRACT OF THE REPORT OF THE COMMITTEE ON MEDICAL JURISPRUDENCE

Of the Medical Society of the State of California, April, 1895.

By G. F. SHIELS, M. D., Chairman, San Francisco, Cal.

A Few Remarks on the Status of the Medical Expert Witness.

The speaker said: The laws governing a witness as to fact and an expert or opinion witness were widely different. A witness as to fact is one who sees, hears, or knows either actual facts connected with the case at issue, or facts from which legal inferences applicable to the case may be drawn. This witness must give evidence when called upon, and should he refuse to answer questions which the Court rules proper to be answered, he is liable to punishment for contempt of Court. The expert witness is one who, through especial study or experience, is particularly instructed in some art or trade, and may give his opinions on questions of science or skill relating to such art or trade. It can, therefore, be readily understood that a medical man, when called upon to give opinion evidence connected with his profession, is an expert witness. This is generally understood and recognized, and it is a common practice for lawyers to introduce such experts in trials where their opinions may be of value to one or other of the contesting parties.

The first phase of the question to which I will direct your attention, is the following:

1. Can a medical expert be subpened and forced to give opinion evidence without being paid a fee, and, should he refuse to give such evidence, can he be held to be guilty of contempt of Court?

2. Can a medical man, when subpened as a witness as to fact, during his examination, be forced to give opinion evidence without being paid a fee, and, should he refuse to give such evidence, can he be held to be guilty of contempt of Court?

In civil cases these questions rarely arise, since the attorneys usually call upon the witness and make a definite business arrangement with him regarding his fee, but, in criminal procedures, it would seem a common source of misunderstanding and trouble.

The common law of England, which, modified by statutes, is the law of the various States of the Union, has clearly established the fact that the scientific or expert witness must be paid; and Mr. Justice Maule said, in the case of Webb *vs.* Page, where this point was at issue: "There is a distinction between the case of a man who sees a fact and is called to prove it in a court of law, and a man who is selected by a party to give his opinion on a matter on which he is peculiarly conversant from the nature of his employment in life.

The former is bound, as a matter of public duty, to speak to a fact which happens to have fallen within his own knowledge; without such testimony the course of justice must be stopped. The latter is under no such obligation; there is no such necessity for his evidence, and the party who selects him must pay for him."

This view is sustained both by the practice in the courts and by the writers on medical jurisprudence. In Taylor's Medical Jurisprudence, which is the recognized Court authority, the following is found: "Before being sworn to deliver his evidence, a medical or scientific witness may claim the payment of his customary fees, unless an arrangement has been made between him and the solicitors who have sent him the subpena. These fees are generally made a matter of private arrangement between the witness and the attorney."

This seems right and just, and it would appear that if it be true in English law, then it must be true in American law, and in the law of California, unless there be an especial statute to the contrary. There is no such statute, and yet the rulings in these cases do not in any way correspond with the plain logic of the above statements, since those of the Superior Courts, and even of the Supreme Courts, are at variance. So much do they vary, that such authorities as Lawson on Expert Testimony, and Rogers on the same subject, plainly state that the question must be regarded as still an open one.

The only two points which are clearly defined are the following: (*a*) An expert need not make a preliminary examination of a case, unless special compensation is made. (*b*) An expert cannot be required to attend throughout an entire trial for the purpose of listening to the testimony, without special compensation.

The speaker then gave a brief resume of the authorities on either side. In Indiana the Supreme Court had, on a case of appeal from the trial Court, committing a physician for contempt for refusal to testify without extra compensation, decided that the commitment was erroneous. In Arkansas the United States District Court had reached a similar conclusion. In Alabama the Supreme Court had sustained the action of the trial Court in committing a physician for contempt. The witness, a physician, had testified as to the nature of the wounds in a murder case, in which he had seen the patient, but had declined to state the nature and character of the wound or its probable effect. Very recently the Supreme Court of Arkansas had decided that an expert testifying for the State in a criminal case could not demand compensation in addition to the usual fees allowed witnesses, as he had not been compelled to make any preliminary examination, nor to be present in Court during all of the trial. This decision is based on the fact that in the absence of a special statute the ordinary statute must govern.

Finding the authorities in such an undecided condition, the speaker said he had interviewed a number of judges and ex-judges of the Superior Court on the subject. He found rather a conflict of opinions, from which the following conclusions had been tabulated:

1. That in civil cases the medical expert opinion witness can demand the payment of an especial fee.

2. Regarding the matter as individuals learned in the principles of law, the gentlemen interviewed are of the opinion that medical expert witnesses should be paid for their professional opinions in all cases.

3. Viewing the matter as Judges in the Courts of California, and as attorneys practising at the California bar, that, in criminal cases, in the absence of an especial statute, and in the presence of a preponderance of precedent, the medical expert witness must give his testimony without other than the fee provided for ordinary witnesses by statute.

The second phase of the question of medical expert testimony to which I shall venture to invite your attention, is that which relates to its value.

Medical expert testimony as now introduced, can be of little value; and for these reasons: There are few men who, when employed in the interest of a corporation or an individual, can resist the tendency to bias; and I have actually seen cases where such witnesses have sworn to opinions to which, in calmer moments, when free from bias, they simply could not give their support. Again, the flat contradictions which occur where medical experts are put on the stand by contesting parties, must lead the intelligent mind to formulate a very poor opinion of our profession. Further, since to be a doctor is a sufficient argument for establishing a man as a medical expert witness, you can readily see how a graduate of a two-year irregular college can, by contradicting it, cause a jury to practically throw out the opinion evidence of even a weighty authority.

The speaker suggested for the consideration of the Society two plans, either of which would prove feasible in giving expert testimony its proper weight:

1. Let the attorneys of each side select two experts, and let the our so chosen select a fifth. This scientific jury could, after careful deliberation, bring in a full and useful report on any technical point which might arise.

2. Leave the matter entirely in the hands of the Court, who could

call one or a dozen medical men to elucidate any technical points which might need clearing up.

He was inclined strongly to favor the Court having the power, since it would entirely do away with the possibility of partisanship, provided, always, that the Court is what it should be: learned, dignified, absolutely impersonal, and above reproach.

In conclusion, the speaker said the last phase of this question of which he would speak, was the advisability of having an especial statute enacted by the Legislature, providing for the payment of extra compensation for expert opinion witnesses. He therefore asked the Society to appoint a special committee, with a view of having the next Legislature enact a statute, which could not read better than the one provided in Minnesota, which was as follows: "That the Judge of any Court of record in this State, before whom any witness is summoned, or sworn and examined as an expert in any profession or calling, may, in his discretion, allow such fees or compensation as in his judgment may be just and reasonable." If constitutional, he would add that all experts be called by the Court, when it shall deem expert opinion necessary for the furtherance of justice.

ABSTRACT OF THE REPORT OF THE COMMITTEE ON OBSTETRICS.

Of the Medical Society of the State of California, April, 1895.

By W. F. CHENEY, M.D., Chairman, San Francisco, Cal.

Laceration of the Perineum and its Immediate Repair.

The speaker said: Laceration of the perineum is not a new subject, and it would seem that in this day every man who attends a case of confinement should be alive to his duty in this direction. But that every man is not, is proven by the cases that continue to present themselves for secondary repair of the perineum. It is not out of place, therefore, to inquire at this time into some of the causes for the neglect of immediate repair, and to look for the reasons why all obstetricians are not doing their duty in this matter.

Laceration of the perineum is not always due to the circumference of the child's head; this leads those into error, who do not inspect the patient after delivery. They have the vulva in view during expulsion of the head; they see the orifice gradually dilate; they observe, with satisfaction, that the perineum slips over the forehead and soft parts of the face without giving way at any point; and so convinced are they that nothing has gone wrong, that after delivery, they consider examination of the mother's parts superfluous and uncalled for.

Thus result the statements honestly made now and then by some practitioners, that laceration of the perineum never occurs in their practice. The fact is, that following expulsion of the head, the lower shoulder of the child has come ploughing through the mother's soft parts, doing the damage that the head had failed to do. The shoulder is often to blame for perineal tears; and so violent, as a rule, is the expulsive effort driving out the body after the head has escaped, and so quickly is the exit made, that no man can tell at the time whether the orifice has or has not been torn. Subsequent examination, carefully carried out, alone can decide whether the integrity of the perineal structures has been destroyed, and if so, to what extent.

It is a fortunate thing for women that sentiment in the lying-in chamber is giving way to sense. Delicacy prescribed that the catheter should be passed by sense of touch, beneath the bed-clothes, without exposure of the person; but that delicacy was responsible for many a cystitis or urethritis, due to contact of the instrument with the bed clothes or with the vulva before at last it found the meatus. So it used to be considered proper to examine the perineum after delivery, only by sense of touch, if at all, to examine whether it was torn. It is not strange that the injury was then so often overlooked; for all the tissues about the vulva are infiltrated and softened by the stretching that accompanies birth, and it is next to impossible to tell with the finger whether these tissues are intact. Unless the damage has been extensive, and the entire perineum destroyed from vagina to rectum, the finger cannot be relied upon to tell a tear from a deep fold in the congested and lax mucus membrane about the floor of the vagina.

Every woman, after labor, should have her vulva submitted to visual inspection by the medical attendant before he leaves the house. It is also essential that the floor of the vagina be examined. Often the exterior of the perineum shows no tear whatever, when within the posterior commissure the mucous membrane, connective tissue and muscles have been deeply lacerated. Such an injury is not uncommon, but it is often overlooked, because it does not appear from without, since the skin is left intact. To bring this injury into view, the best way is to insert a finger in the rectum and push forward the vaginal floor.

Unfortunately, there exists a popular impression, shared in by some of the medical profession, that a perineal tear in labor without forceps, should never occur. So it happens that the man who examines for injuries after labor, and who honestly attempts to repair them at once, if found, has discredit cast upon his work; while another man, less conscientious, is held up as a model obstetrician by the very woman whom he leaves in a condition for the gynecologist to take care of later on. It is a fact, that no infallible method has yet been found to prevent perineal tears, especially in the management of primaparæ. Dr. Goodell, after summing up the devices, recommended for its prevention, said: "Yet the perineum tears, and tear it will, until woman becomes like the cherub of the old masters—all wings and no body."

The speaker said it had seemed to him, from trying both ways, that labor, with the woman in Sims' position, gives better results as regards the perineum than with the woman on the back. Sims' position takes the weight of the presenting part of the child off the soft tissues posteriorly, and places it against the bony symphysis, where little harm can be done. There is not the same tendency on the part of the uterine contractions to crowd the head directly through the pelvic floor, for the force is directed forward of the perineum, against the symphysis and the vulvar orifice. This position, too, gives better opportunity to prevent laceration by the posterior shoulder of the child. The weight of the body of the child is taken off the soft parts; and by manipulation the posterior shoulder can be guided over the posterior commissure with the hand, and so delivered, while the opposite shoulder is, for the moment, crowded behind the symphysis. This manipulation is possible also with the woman on her back, but must be made then in opposition to gravity and with less chance of success.

There are but few conditions, such as eclampsia or extreme exhaustion, following hemorrhage, rendering the operation for immediate repair of the perineum impracticable. The speaker said: Much of the writing of the present day on this subject, it seemed to him, does harm, because it tends to complicate the matter and make the operation appear a formidable procedure. As a matter of fact, for the repair of an ordinary laceration of the perineum all that is required is a surgeon's needle and silk, plenty of hot water and a moderate amount of common sense.

One of the most important facts in connection with this subject is that the laceration need to be repaired at once in order to secure union; several hours may be allowed to elapse after labor is completed and still the tissues will unite by first intention. This is of vast significance to the operator as well as the patient. Both are frequently exhausted by hours of anxiety and physical exertion, and to each the prospect of something more to be endured after labor is concluded, is intolerable. It is often better to wait, therefore, before putting in the stitches. The speaker had several times repaired a perineum as late as nine hours after it was torn, and once as late as twelve hours, each time with success.

For the ordinary operation, where the perineum is torn through half way to the anus, or even entirely to the anus, without destruction of the sphincter, an anesthetic is not required, because sensation in the parts has been blunted by the previous stretching and pressure. The patient should be placed across the bed with her hips down to the edge. If assistants are at hand to hold each lower limb, so much the better; but they are not indispensable. Towels or a folded sheet or spread are placed beneath the hips to prevent soiling the bed. The vulva and perineum are then washed thoroughly to remove all blood clots and loose shreds of tissue. This may be done as well with plain boiled water as with a solution of bichloride or carbolic acid, unless in exceptional cases, where the woman has previously had a suspicious vaginal discharge. The needle used for suturing should be large enough to take in plenty of tissue, and preferably, should have a half curve. A needle holder is an assistance, but not a necessity. For suture material, plain black or white silk answers every purpose; black having the advantage of being easily seen when the time comes for removal. Silkworm gut is very satisfactory, except that the ends are sharp and stick the patient after the sutures are tied. It is possible to prevent this by clamping a perforated shot on the ends and then cutting the latter off close, but this complicates the operation and introduces details that are not absolutely necessary.

If there is an internal tear extending up the floor of the vagina, either with or without external laceration through the skin, the easiest way to get at it is by placing a finger in the rectum and pushing the tissues forward, while the other hand passes the needle and brings the rent together. This part of the work naturally should be done before the outside is sewed up, and if it is not done, simply making the vulva its former size by external stitches accomplishes nothing for the women subsequently, and she suffers as much as if there had been no effort at repair. For this internal tear catgut is the preferable materal, so that the stitches will not have to be removed. The sutures should be passed deeply on each side to bring together the retracted edges of the severed muscles and restore the proper thickness of the recto-vaginal septum. After this the external laceration should be repaired with silk, from the anus up to the posterior commissure.

The after-treatment of a perineum that has been repaired is comprehended in the word cleanliness. It used to be argued that union could not be expected with the lochial discharge constantly running over the line of suture. But union can be obtained in every instance if sufficient care is taken to keep the parts clean. Vaginal douches are unnecessary, in fact are better omitted; but too much water can hardly be used on the vulva and perineum. The water should be quite hot, and should be poured over the vulva, from a pitcher or a fountain syringe, into a bed pan placed beneath the hips. For the first few days, while the lochia are profuse, this washing should be done every three or four hours; after that three times or twice a day. Particularly should this douche be given after every discharge of urine.

With regard to the dressing of the sutured perineum, the ideal materials are a pad of iodoform or bichloride gauze placed next the sutures, covered by a thicker pad of absorbent cotton; the whole held in place by a napkin of linen or cheese-cloth, pinned to the binder in front or behind. Each time the perineum is douched the old pads should be thrown in the fire and fresh ones applied. If the gauze and cotton are not available, clean linen or cotton or cheesecloth napkins may be placed immediately next the perineum. The household rag-bag, to which recourse is so often had by the ignorant for perineal napkins, is one of the abominations of obstetric practice, and should be utterly rejected as a source of supply.

The more extensive lacerations involving the sphincter ani, and perhaps extending an inch or more up the bowel, are not so easily repaired, and fortunately they are not so common. For these more time is required, more extensive preparations and greater skill on the part of the operator.

In conclusion, the speaker said he would urge thorough examination of the perineum after labor, as a routine measure, and more frequent resort to immediate repair when laceration is found.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal.,

HENRY GIBBONS, JR., M.D., Professor of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal., and

WM. FITCH CHENEY, B.L., M.D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal.

A New Procedure for Treatment of Placenta Previa Centralis.—NIJHOFF, of Amsterdam (*Centralbl. f. Gynäkol.*, No. 8, 1895), reports a case of placenta previa centralis, in which the patient had gone to full term. As the cervix at first would not admit one finger, the bleeding was not severe and the pains were weak, he tamponed the vagina with iodoform gauze. Some hours latter a hemorrhage came on, which soaked through the tampon. The latter was removed and the cervix found to admit two fingers. Nijhoff then concluded to bore through the placenta and perform podalic version. He easily penetrated the placental tissue, but found the amnion tough, so that he could strip it off and push it ahead of his hand. The child lay with the head in advance, and with a pain the membranes bulged down into the tear through the placenta. Thereupon it occurred to him to leave the amnion intact, hoping that the bag of waters would broaden the tear in the placenta, acting both as dilator and as intrauterine tampon. He tamponed the vagina again and waited. There was no further hemorrhage, and soon after good pains set in. In due course of time the membranes ruptured, then the pains increased in force, and at last a living child was born. Neither before nor after expulsion of the placenta was there any more bleeding. Convalescence was undisturbed. From this experience, Nijhoff recommends the following rational method for treating complete placenta previa: As soon as the internal os can be entered by one or two fingers, bore through the placenta carefully, so as not to penetrate the amnion. Release with one or more fingers the amnion, as far as possible. Then, by rubbing over the fundus of the uterus with the other hand, excite a contraction to make the amnion protrude into the tear. Then tampon the vagina firmly with iodoform gauze and wait, watching the case continually meanwhile. If the amnion is unintentionally penetrated at the time of operation, then employ combined version, bring down a foot and plug the lower uterine segment with a hip.

Will Quinine Excite Uterine Contractions?—COROMILAS, of Calamata, Greece, claims (*American Gynecological and Obstetrical Journal*) that quinine given during pregnancy may cause uterine contractions and bring on miscarriage. He reports three cases where labor pains came on following administration of quinine. In one case he gave the valerianate to a woman eight months pregnant, for intermittent fever, $2\frac{2}{5}$ grains every half hour; after the third dose labor pains came on. In the second case, six months pregnant, he gave for influenza the salicylate, $2\frac{2}{5}$ grains every half hour; after the third dose labor came on and resulted in miscarriage. In the third case, four months pregnant, 20 grains of the sulphate were taken within an hour, and abortion promptly followed. [In this country the generally accepted view is that quinine will not excite uterine contractions, but will stimulate them, once they have been initiated. Dr. Albert H. Smith some years ago recommended the bisulphate, in a single dose of 15 grains, for protracted first stage of labor, with tardy dilatation of the os. I have resorted to this expedient in this condition several times, and have found it to work well. H. C. Wood attributes the result not so much to a specific action of the quinine as to its arousing the general nervous forces of the system. W. F. C.]

SURGERY AND ANATOMY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital Sacramento, Cal.,
G. F. SHIELS, M.D., C.M., F.R.C.S.E., Surgeon Post-Graduate Department University of California, San Francisco. and
GEO. B. SOMERS, M. D., San Francisco, Cal.

Acute Gonorrheal Rheumatism.—DR. HOWARD LILIENTHAL, in a paper upon this subject, asserts his belief in the evidence of gonorrheal rheumatism as a disease. In the most severe cases there is a group of symptoms so characteristic that one may repeatedly make a working diagnosis without even the corroborative evidence of coëxistent gonorrheal urethritis. The discovery of gonococci in secretion or tissue is proof of gonorrhea; but the failure to discover them does not prove absence of the disease, especially if clinical symptoms be present. The disease has been classified according to the tissue involved, whether joint, tendon-sheath, or bursa. No inflammation causes more exquisite and demoralizing pain than the one under discussion. The pain may be a means of diagnosis. The disease is not usually mono-articular, though occasionally a single joint is involved, and there is nearly always more or less disease in the neighboring tendon-sheaths and bursæ. This circumstance is probably the explanation of Charcot's three points of tenderness when the knee or the ankle is involved. They are all in the sole and at the spots where the body weight is principally borne; one at the heel directly under the calcaneum, one under the head of the first metatarsal, and one under the head of the fifth metatarsal. This tenderness makes a characteristic clinical picture. It is due to the inflammation of the bursæ situated in the above mentioned places. Another bursa, the retro-calcanear, between the calcaneum and tendo-Achillis, is also commonly the seat of pain, constituting the majority of so-called Achillodynia. It is always best to make a diagnosis in this disease without probatory puncture, though if there is question as to the advisability of operative procedure, this precaution should not be neglected. One unpleasant characteristic of the malady is its resentment of surgical operative interference. The prognosis in all the more acute gonorrheal rheumatisms is grave. Even with the greatest care, the inflammation may go on to the destruction and anchylosis of joints, or even to a general septic intoxication.—*Boston Medical and Surgical Journal*, January 24, 1895.

A Case of Frog-skin Grafting.—DR. GEORGE SEELEY SMITH, of Providence, R. I., reports an interesting case, in which frog-skin and human epidermis were both used, and the frog-skin "took" even better than the human skin. A child five years of age was burned over a large area of the trunk, face, and neck. When first seen, four weeks after the accident, the entire surface was covered with healthy granulations that bled freely upon the slightest touch, and the fold of the axilla was already firmly adherent so that the arm was firmly bound down. The adhesions were broken up under ether. Owing to the large surface, healing by granulation would not only take many months, but would result in considerable deformity. Skin grafting was decided upon. As sufficient human contributions could not be obtained, it was determined to experiment with frog-skin. To begin with, twenty pieces of skin, each a quarter of an inch square, were placed in two rows of ten each, each graft being separated from its neighbor by a space of half an inch. In two days the skin had become identified with the granulating surface, and in five days the grafts had lost their original color, and each had sent forth embryonic epithelium meeting that of its neighbor. Pieces were taken from the belly and legs of the frog, and also from the back, in cases where the frog was small, and the skin not too thick. It was found that the comparatively thick skin from the back took more satisfactorily than that from the belly or leg. The method used in dressing was as follows: The surface was first cleansed by irrigating with a warm solution of carbolic acid (1:40), and after the detritus had been entirely cleared away, the parts were washed with sterilized water. Each graft was then firmly pressed into the granulating surface. Following this, a dressing of boric acid and vaseline (a drachm to the ounce) was spread upon strips of compress cloth and applied so as to fit the parts snugly. Outside of this was placed sterilized gauze, and as a final step the roller bandage. The parts were all grafted in during the course of seven weeks. The skin, however, was soft and immature, and required constant care and dressing for three months after. *Boston Medical and Surgical Journal*, January 24, 1895.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By Wm. Ellery Briggs, M.D., Sacramento, Cal.

Sinus Thrombosis.—Dr. Jansen reported 12 cases of thrombosis of the lateral sinus in Lucae's Clinic, in 1893. In 2 there was suppuration of the bulb only; in 1 thrombosis of the cavernous and superior petrosal sinuses. In the 9 others the transverse sinus was involved, six times together with the jugular, and twice with the cavernous sinus. The author thought from these statistics that it might be possible by early and energetic operative procedure to limit the thrombosis to the transverse sinus, or to have only an isolated thrombosis of the bulb of the jugular to deal with. The chief dangers in sinus thrombosis are metastases in the lungs, and purulent arachnitis; but these vary in frequency according to the sinus affected. In cases of jugular thrombosis, pyemia and metastases occur in 76.5 per cent.; in transverse sinus thrombosis in 35.5 per cent.; in inferior-petrosal sinus thrombosis in 30 per cent.; in cavernous sinus thrombosis not at all. Pyemia, through osteo-phlebitis without involvement of a large portion of the vein, is, according to the author's experience, very rare. When pyemia persists after a mastoid operation, thrombosis of a large portion of a vein should be suspected. In pure sinus thrombosis without degeneration, symptoms may be completely wanting. The most important symptoms are pyemia fever, with chills and metastases optic neuritis, signs of meningeal irritation, and signs on the part of the jugular veins. Of particular importance is the abscess outside of the sinus, whose early diagnosis, though difficult, is of great practical value, as by emptying it the formation or the purulent degeneration of a thrombosis may be prevented. The speaker thought that thrombosis limited to the sinus should be operated upon only in the sinus.—*Archives of Otology*, January, 1895.

Pilocarpin in Croup.—Dr. Sziklai strongly recommends the use of pilocarpin as a specific in all cases in which the mucous membrane becomes covered with a transudate apt to coagulate. The abundant secretion of mucus produced by the pilocarpin tends to loosen the fibrinous exudate adherent to the membrane, and it is readily expelled from the larynx. The pilocarpin not only assists in dissolving and removing the membrane present, but also tends to prevent its reforming. It can be administered to children from 1 to 3 years old in doses of 0.01 to 0.03 grammes; 3 to 6 years 0.3 to 0.04 grammes; 6 to 10 years 0.05 grammes; 10 to 15 years 0.06 to 0.07 grammes; adults 0.07 to 0.1 grammes. The author concludes as follows: (1) Pilocarpin is a specific for croup. (2) The therapeutic action of pilocarpin manifests itself almost immediately; the cure of croup follows in a few hours; pneumonia is cured in two or three days. (3) The effect is the same, whether the remedy is administered subcutaneously or by the mouth. In case of necessity one may have recourse to suppositories or vaginal bougies. (4) Subconjunctival injections are preferable to other methods where there is imminent danger of death, or where the membrane is very extensive. (5) Pilocarpin not only abridges the course of the disease but prevents a fatal issue. (6) Administered early it also acts as a prophylactic. (7) It can be administered in twice the officinal doses without danger.—*Wien. med. Wochenschrift—Nouveaux Remèdes*, December 24, 1894.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. Simmons, Jr.. M.D., Sacramento, Cal.

Gonorrheal Immunity.—Jamin (*Ann. des mal. des org. Genito-urin.*,) in reviewing a recent work by Guiard on gonorrhea, comments favorably on the author's theory regarding inoculation and immunity, based on the following facts: (1) Gonorrhea is a self-limited disease, recovery following after a varying length of time, without any treatment other than ptisanes, baths, and hygiene. (2) Abortive treatment does not succeed rapidly and fully until the period of acute inflammation has passed. (3) A patient, either male or female, apparently, though not really cured, is capable of transmitting a subacute gonorrhea—that is, the colorless drop of secretion is capable of inoculation if it contains a few gonococci. The author consequently believes that the gonococcus during its evolution modifies its culture-media—*i. e.*, the urethral mucous membrane. It continues to grow there but becomes more and more attenuated and latent, until it finally disappears. Unless this is true, a gonorrhea, untreated, would last indefinitely, the cocci multiplying and reinoculating themselves in the infected urethra continuously. It is at the time when the virulence begin to diminish that abortive treatment succeeds. If, on the other hand, this attenuated gonococcus comes in contact with a healthy mucous membrane in another individual it is immediately rejuvenated, prospers, and produces acute gonorrheal symptoms, since it finds there a suitable culture-medium, which is not exhausted with that from whence it came and where it was about to die. The objectors to this theory say: "If you admit that the *rôle* of the culture-medium is thus superior to that of the microbe, how can you explain acute attacks in men having gleet? How can their exhausted mucous membrane become reinoculated?" Guiard believes this reinfection is impossible in cases where the gleety discharge contains cocci. He, however, reserves his opinion regarding this form of relative immunity until further facts are procured.—*American Journal of Medical Sciences*, April, 1895.

Treatment of Buboes by Injections of Iodoform and Vaseline.—Rullier (*Archives de Médecine et de Pharmacie Militaires*,) warmly commends Fontan's treatment of buboes. This consists in, first, thorough antiseptic cleansing of operative region, followed by puncture and complete evacuation of the pus. Ten per cent. iodoform vaseline mixture, liquefied by heat, is then injected and a bichloride dressing applied. The complete evacuation of the pus is one of the essential conditions for success in this operation. Before the iodoform injection the whole cavity is washed out with a solution of 1:1000 bichloride. If this occasions bleeding, pressure with wet bichloride cotton is exerted, and the flow of blood ceases. The iodoform vaseline mixture is liquefied by putting the vessel in which it is contained in a water bath, heated to 116° F. The pus cavity should be filled, but not distended. The pain disappears from the first day, the periadenitis rapidly lessens, and cure is accomplished in six or seven days, leaving no cicatrix or other visible trace. In about 12 per cent. of cases the puncture closes at once, and the patient is able to resume his duties in one or two days. In most instances there is some discharge of vaseline, with a few drops of pus, for a few days. The wound should then be washed antiseptically and dusted with iodoform. If the cavity is not obliterated, a new injection of vaseline should be made in two days, followed by a third two days later, if this is required. This treatment is inefficacious only when the skin is so thoroughly devitalized that sloughing takes place. Seven illustrative cases are reported.—*Therapeutic Gazette*, April, 1895.

A Rare Form of Acne.—In a paper read before the Swedish Society of Physicians, MAGNUS MULLER described the case of a widow, aged 53 years, in whom ulcerations of the nose appeared, crusts forming in the nostrils and spreading rapidly outward in the shape of large, yellow, and painful spots. Within three months the disease had covered the lower half of the nose and the upper half of the lip. The skin on the nose was reddened, thin, and glossy in some parts, and showing rough spots, as large as a pea, in others. When treatment was neglected, waxy or brownish-gray crusts appeared, which, on removal, showed the thin, slightly moist epidermis, and in other places superficial excoriations, or deep, sharp-edged ulcerations, from which a yellowish-gray pus exuded. The whole appearance was that of exceedingly vascular infiltration of an indolent nature, the principal seat of which was in the follicles of the skin. The ulcerations healed rather slowly, independent of any treatment, new ones appearing in the vicinity, healing in their turn and leaving superficial scars. Foci about as large as a bean, and similar in appearance to those on the nose, also developed on the left cheek, the chin, and behind the left ear.—*Universal Medical Journal*, April, 1895.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

The Therapeutic Action of Red Marrow.—This agent contains all the essential solid components of the blood, its chief constituents being oxyhemoglobin, globulin, nucleo-albumin, all powerful factors when injected to carry on the reparative processes going on in the human blood. The material is taken from the flat bones of the skull, bodies of the vertebræ, and heads of the long bones of calves and oxen. The marrow substance is put up in "tabloids," and I have found them eminently efficient in a few weeks. Their full value as hemooietics cannot as yet be estimated; but, nevertheless, some general idea may be gleaned that they are likely to replace iron, arsenic, and even spleen substance in the future treatment of anemia. Not only does the constitution improve, but the microscopic condition of the blood is changed; megalocytes are rarely seen, hemocytes form good rouleaux, there is an increase of hemoglobin to 70 per cent. by von Fleischl's hemometer, and an increase of red blood cells from 1,500,000 to 3,000,000 and upwards per cubic millimeter. These phenomena begin to show themselves in eight weeks or less, when the tabloids are taken regularly, even after a course of iron, arsenic and spleen substance have failed to make any impression in the downward course of the patient.—DR. FORBES, in *Medical Press aud Circular*, January 23, 1895.

Hematin-Albumin.—FINSEN has succeeded in obtaining a durable preparation from blood, consisting principally of dried albumins, holding a large amount of iron. It is a dark brown powder, odorless, and almost tasteless, prepared from the blood of the ox or pig. The albumins are separated from the extractives and salts, and after many washings they are centrifugalized and then evaporated at a low temperature (vacuum). At the preparation measures are taken to destroy any microörganisms that may be present. One pound of hematin-albumin contains the albumins of about six pounds of blood. The remedy has been tried in several hospitals in Copenhagen with satisfactory results. It is well borne and easily assimilated. It does not cause constipation, but gives a reddish color to the motions. The dose is one to two teaspoonfuls three times daily for adults, and may be taken pure or mixed with cocoa.—*British Medical Journal*, February 2, 1895.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

Diphtheritic Paralyses.—DR. FELSENTHAL, of Mannheim, very interestingly reviews this subject, the essential facts of which are as follows: Even during convalescence from diphtheria, death may take place suddenly from paralysis of the heart. Paralysis of the heart may occur at any stage of the disease, and as late as six weeks after every local symptom has disappeared, hence the advice of Henoch is apposite: " Never give a favorable prognosis in diphtheria until six weeks have elapsed, since all local symptoms have disappeared. Paralysis of the heart is preceded by the following symptoms: apathy, pallor, insomnia, anorexia, emesis, and precordial pain. The heart tones are distant; the second tone shows the gallop rythm, a certain sign of cardiac weakness. The pulse is weak and arythmic; the liver, in consequence of stasis, is enlarged, the respirations are increased, and, at the termination of the sickness, merges into the phenomenon of Cheyne-Stokes. If the case terminates in recovery, which is rare, the heart tones become stronger and less irregular, and after weeks or months recovery can be perfect. The cause of the cardiac collapse is now supposed to be myocarditis. The treatment of cardiac collapse is almost negative, the essential object being to maintain the strength of the heart until the diphtheritic intoxication has been overcome. Diphtheritic paralyses usually follow the mild, rarely or never the gangrenous or septic cases. Paralysis of the velum is manifested by nasal voice, regurgitation of food into the nose, and anesthesia of the palate and pharyngeal wall. In connection with this form of paralysis, there may be paralysis of the larynx and esophagus, and motor weakness of the extremities; anesthesia may also occur. Muscular paresis of the trunk and upper extremities may develop later; paresis of accommodation, and paresis and paralysis of the facial, oculomotor, and abducens may occur. Relative to the cause of the diphtheritic paralysis, it is conceded to be dependent on a neuritis of the peripheral nerves; changes in the spinal cord, however, may coexist. The infectious neuritis begins in the nerve endings contiguous to the primary point of infection, and travels further along the nerve sheaths. The light forms of paralysis recover spontaneously, whereas the graver forms demand active treatment. The writer details the conventional methods of treatment, but emphasizes the use of the soft rubber tube for the purpose of conveying nourishment to the stomach. This method of treatment has the double advantage of conveying food to the stomach when swallowing is difficult, and prevents, if anesthesia of the larynx and paralysis of the epiglottis exist, the entrance of food into the larynx and bronchi.—*Der Kinder Artz*, February, 1895.

The Diagnosis of Septico-pyemia.—Infection of the organism may take place without any demonstrable point of entrance of the infectious matter, a form of the affection known as cryptogenetic septico-pyemia. The clinical picture in septico-pyemia differs from that of pyemia, as in the latter affection there is some evidence of metastatic suppuration. The etiology, however, is the same in both. The microbes of suppuration produce both affections. It is reasonable to assume, since the discovery of the organisms of suppuration, that the diagnosis of septico-pyemia would be easy by mere demonstration in the blood of the microbes in question. This, however, is not the case. The demonstration of micro-örganisms in the blood, in cases of septico-pyemia has, in the majority of instances, been negative. The negative results are ascribed by Sittmann to be due to the error of not employing sufficient blood for culture experiments. In the examination of his cases, he removed from the veins, by aspiration, 1 c.cm. of blood, this was mixed with the culture medium and plates made. In all 23 cases of primary and secondary septico-pyemia were examined. By primary septico-pyemia, he understands the entrance of bacteria in the circulating blood, together with other organisms as occurs in furunculosis and pneumonia; whereas, in secondary infection, the activity of other organisms, as in typhoid fever and tuberculosis, invite the presence of the germs of suppuration. Staphylococci were found 11 times, streptococci, 4 times; pneumococci, 6 times; staphylococci and bact. coli, 6 times. In his cases, the staphylococci were predominant. His investigations prove conclusively that in septico-pyemia, the germs of suppuration are always found in the circulating blood, although in small numbers, and that their demonstration furnishes the most positive evidence in the diagnosis of this affection. The character of the organisms found may be of value in prognosis. The best prognosis can be made when staphylococci are found; less favorable if pneumococci are demonstrated, and least favorable if streptococci are present or in mixed infection. The bacteriological examination of the blood will furnish, in cryptogenetic septico-pyemia, the source of infection. Thus, if we find pneumococci, we look to the lungs as the source of infection; if the bact. coli, we look to the intestines, biliary passages or a cystitis.—*Münchener med. Wochenschrift*, January 15, 1895.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M.D., Assistant Physician, State Asylum for Insane, Stockton, Cal.

Treatment of Epilepsy.—In his present teachings concerning epilepsy, PROF. EULENBURG places the greatest importance upon the bromides, especially bromide of potassium, but is of the opinion that a combination of bromides act better than a large dose of any one, and therefore uses bromide of potassium, sodium and ammonium in the proportion of 2:2:1. He administers the combination in water charged with carbonic acid, to escape the cumulative effect of the remedy and the consequent bromism by increasing the activity of the kidneys; at the same time furthering the action of the drug itslf. The dose should never be less than 15 grains. As much as 135 to 150 grains have been given at one dose, two or three times, followed by smaller doses. The hours for taking the medicine depend upon when the attacks come on. If they appear during the day, two large doses are given night and morning. If at night only, one dose is given on going to bed. Bromide must be taken for a long time; for two years, at least, after the last epileptic attack, during which period the remedy must not be discontinued, even for intercurrent disease. When it has been ascertained what amount of the medicine is necessary to keep the disease in check, the dose need not be varied, but may be given steadily until the treat ment is no longer necessary. About 5 per cent of epileptics are unable to take bromides at all. For these there remain preparations of copper, bismuth, silver, arsenic, atropine, canabine, lobeline, digitalis and curare. Among the newer remedies are hydrate of amyline, antifebrine, antipyrine, borax, nitroglycerine, osmic acid and ergot. Coffee, tea, tobacco, spices, and alcohol especially must be forbidden. Epileptics should eat oftener than others to avoid eating too much at a time. If the attacks are nocturnal, the last meal should be very light, and taken early, omitting all meats and fatty substances. If much anemia or exhaustion is present, nitrogenous food and the Weir-Mitchell treatment are recommended. Out-of-door life and absence of intellectual strain are conditions most favorable to epileptics. Eulenburg considers electricity and hypnotic suggestion thoroughly rational in the treatment of epilepsy. Hydrotherapy is of service, though sea-bathing is contraindicated.—*France Médicale—Journal Nervous and Mental Disease.*

FORMULÆ.

I. **Bronchitis.** *Sedatives—*

(*a*) Potassium citrate...... ℥ ss
Lemon juice........... ℥ i
Syrup ipecac.......... ʒ ii
Aquam *ad*............. ℥ iii

S.—For an adult one-half ounce four to six times a day.—H. C. Wood, M.D.

(*b*) Vini ipecacuanhæ...... ʒ ii
Liquoris potasii citratis. ℥ iv
Tincturæ opii camphoratæ
Syrupi acaciæ āā....... ℥ i

S.—One-half ounce t. i. d.—J. M. Da Costa, M.D.

(*c*) Codeinæ............gr. iii
Ac. hydrocyan. dil...m xxiv
Syr. limonis.......... ℥ iss
Aquam *ad*............ ℥ vi

S.—Shake. One-half ounce every three hours.

2. *Stimulating Expectorants.*

(*a*) Ammonii carbonatis... ʒ ss
Spiritus chloroformi.... ʒ v
Syrupi acaciæ.......... ℥ ii
Aquam *ad*............. ℥ iv

S.—Two drachms t. i. d.—Prof. G. Johnson, M.D., London.

(*b*) Ammonii chloridi...... ʒ ii
Mist. glycyrrh. co...... ℥ iii

S.—Two drachms t. i. d.—J. M. Da Costa, M.D.

(*c*) Spiritus chloroformi...m xx
Acidi hydrobrom...... ʒ ss
Syr. scillæ............ ʒ i
Aquam *ad*............ ℥ i

S.—For one dose (adult), three times a day.—J. Milner Fothergill, M.D.

(*d*) Ammon. carb.....gr. xxxii
Ext. renegæ fl.
Ext. scillæ fl. āā...... ʒ i
Tr. opii camph........ ʒ vi
Aq................... ℥ ss
Syr. tolu. *ad*.......... ℥ iv

S.—One drachm *pro re nata.—Bellevue Hospital, New York.*

Caffeine in Cardiac and Renal Affections.—In valvular disease it is indicated only where there is want of compensation, but even here digitalis and strophanthus should be used first. In nervous cases begin with small doses. In aged persons it should be combined with digitalis. In chronic nephritis it may be used for a considerable time.

Caffein .... ʒ ss
Benzoate of soda........ ʒ ss
Syrup of Peppermint
Water .... ℥ ii

S.—Three to 6 dessertspoonfuls daily.

Caffein ....gr. iii
Powdered digitalis......gr. i
Powdered camphor .....gr. i
Sugar ....gr v

S.—For I wafer. Four daily.—*Medical Press and Circular.*

Intestinal Antisepsis.—HUCHARD uses:

Benzonaphthol	ʒ viss
Powdered charcoal	℥ ss
Pancreatin	gr.lxxx

Mix and divide into 50 powders.

S.—Take from four to six powders a day.—*New York Medical Journal.*

Chloroform as a Tenicide.—In the University Polyclinic of Berlin the following is used:

Chloroformi	ʒ i
Ol tiglii	gtt.i
Glycerine	℥ i

S.—To be taken at 1 dose.—*Lancet-Clinic.*

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for March, 1895.—The deaths registered in 66 town districts of the State, during the month of March, in a population of 752,823, correspond to an annual rate of 18.36 a thousand, the total mortality having been 1,132. 57 deaths were due to zymotic diseases, giving an annual rate of .73 a thousand. Of these, 6 were due to diphtheria, 10 to cholera infantum, 14 to typhoid fever, 4 to diarrhea and dysentery, 12 to cerebro-spinal fever, 1 to whooping cough, 2 to croup, 1 to intermittent and remittent fevers, 3 to scarlet fever, 4 to measles, and 0 to small-pox. 415 deaths resulted from diseases of the respiratory organs, giving an annual rate of 6.60 a thousand. Of these, 212 were due to consumption, 142 to pneumonia, 51 to bronchitis, and 10 to pulmonary congestion; the rate being, for consumption and pneumonia, 3.36 and 2.16, respectively. 103 deaths resulted from diseases of the heart, 2 from alcoholism, 0 from erysipelas, 45 from cancer, and 455 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 587,000, was 19.59. The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from Berkeley.

METEOROLOGY.

Summary for March.—*Temperature.*—The normal temperature of the State for March is 53.0°; the average for March, 1895, was 5.26°, a departure from normal of -0.4°. The highest monthly mean was 76.4°, at Mojave; the lowest, 27° at Bodie. The maximum temperature was 102° at Ogilby on the 26th. The mimimum, 11° below zero on the 13th, at Bodie. The greatest monthly range was 67°, at Bodie; the least, 27°, at Point Lobos. The absolute range for the State was 113°.

Rainfall.—The normal precipitation for the State for March is 3.43 inches; the average for March, 1895, was 2.66 inches, a departure from the normal of -0.77 of an inch. The greatest monthly precipitation was 12.54 inches, at Morse's house, in the Little Bear valley, of the Arrowhead Reservoir Company, in the Sierra Madres mountains, of San Bernardino county. The least, a trace at Keeler and Mammoth Fort.

Wind.—The prevailing direction of wind was west.

Unusual Features.—The unusual meteorological feature of the month was the frost of the 14th, 15th and 29th.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for March, 1895.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn .... Cal.	52.9	81	32.0	------	------	------	----	3.09	------	---	---	---	S.W.	Southern Pacific Company.
Berkeley .... "	49.0	70	35.0	58.0	45.0	13.0	6	2.64	86.0	14	6	11	S.W.	Obs. University of California.
Colfax .... "	48.7	78	29.0	------	------	------	----	4.76	------	---	---	---	NE. SE.	Southern Pacific Company.
Eureka .... "	48.0	75	31.0	55.0	31.0	24.0	11	5.31	83.0	6	18	7	N.W.	Weather Bureau Dept. Agr.
Fresno .... "	54.0	77	33.0	65.0	43.0	22.0	6	1.84	71.0	9	14	8	N.W.	" " "
Independence.. "	49.0	76	25.0	61.0	37.0	24.0	2	0.12	31.0	15	10	6	N.W.	" " "
Los Angeles.... "	56.0	84	38.0	65.0	46.0	19.0	6	3.77	77.0	11	9	11	W.	" " "
Monterey .... "	53.8	70	38.0	------	------	------	----	1.94	------	---	---	---	S.	Southern Pacific Company.
Napa .... "	54.0	75	32.0	64.0	45.0	19.0	6	2.21	81.0	8	13	10	S.W.	Station Napa Insane Asylum.
Oakland .... "	51.0	71	37.0	60.0	46.0	14.0	7	2.00	83.0	10	10	11	W	Chabot Observatory.
Paso Robles.... "	52.0	75	26.0	61.0	42.0	19.0	5	1.28	67.0	12	12	7	S.	Southern Pacific Company.
Red Bluff....... "	53.0	74	34.0	63.0	43.0	20.0	7	2.59	68.0	13	9	9	S.	Weather Bureau Dept. Agr.
Sacramento. ... "	54.0	70	34.0	62.0	45.0	17.0	6	1.20	71.0	9	17	5	S.E.	" " "
San Bernardino "	55.0	86	33.0	67.0	44.0	23.0	5	3.44	72.0	12	15	4	W.	A. K. Johnson, M. D
San Diego....... "	55.0	74	38.0	63.0	48.0	15.0	9	1.43	80.0	16	8	7	N.W.	Weather Bureau Dept. Agr.
San Francisco.. "	53.0	70	40.0	57.0	47.0	10.0	9	1.89	78.0	9	15	7	W.	" " "
Santa Barbara.. "	54.0	78	38.0	62.0	46.0	16.0	5	1.99	75.0	17	5	9	W.	Hugh D. Vail.
Santa Cruz...... "	55.0	79	33.0	65.0	45.0	20.0	6	3.08	------	15	5	11	W.S W.	W. R. Springer.
Yuma.......... A. T.	64.0	97	38.0	79.0	50.0	29.0	1	T.	38.0	22	8	1	W.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: MAY, 1895

THE MEETING OF THE STATE SOCIETY.

The twenty-fifth annual meeting of the State Society was eminently a successful one. This opinion has been expressed by those whose observation of many meetings entitles their judgment to weight. It has been remarked that the attendance at the sessions was much below the average. This is an error into which many fell, and was doubtless due to the fact that the meeting was held in a hall much larger than any previously occupied. The old B'nai B'rith hall, which has seen so many meetings, was much smaller in every way. Golden Gate hall can seat over 600 people, and while wider and loftier than the old hall on Eddy street, it has a large gallery and an ample rostrum to still further increase its size. At several of the sessions there were between 80 and 100 persons present, and at one of the evening sessions 154 persons were counted. Even this only made a fair showing, whereas it would have more than filled the old hall, in which, according to the Secretary, there had never been more than 90 votes cast at any election. It is unfortunate that the size of the hall should have created an unfavorable impression, as it was by all odds the most convenient and satisfactory that has ever been utilized for this purpose. Everything had been so ordered by the Committee of Arrangements, that there were no hitches, and nothing occurred to interfere with the business of the meeting.

The principal feature distinguishing the twenty-fifth annual meeting was the large number of excellent papers presented. Never before were there as many that might be called first-class, and very few were mediocre. For the first time in the history of the Society in recent years, every committee presented a report, an example worthy of future emulation. There were in fact quite as many papers as could have been read and discussed if the Society had always come to order promptly on time. This, however, seems to be impossible in San Francisco, though some of the tardiness of members has been ascribed to the place of meeting being far removed from down-town centers. The discussions were good, some of them excellent, others not as full as was desirable. The great difficulty, under which authors labor, of confining their papers within the time allowed by the by-laws tends to curtail the discussions. It is also unfair to others who have complied with the rules. There should be no difficulty whatever in bringing a paper within the limits of twenty or twenty-five minutes. A great deal can be said in that time on any subject and much useless detail omitted. It should be borne in mind that papers are to interest and not to weary an audience. Many that will be read at leisure when in print will speedily tax the endurance of every listener, and will effectually dampen discussion. It must also be remembered that an author with a forty-minute paper who is prepared to ask the indulgence of the Society for an extension of time is trespassing so seriously on the rights of others that he deserves summary repression.

DR. SIMMONS made an efficient presiding officer, at times perhaps too lenient with the more prolix authors or the more ambitious speakers. His conduct during an occurrence, unexampled in the history of the Society, entitles him to the highest credit, and the few plain statements then made will doubtless have a wholesome effect. On Thursday, the closing evening of the meeting, a banquet was tendered to the visitors by the County Medical Society at the Palace Hotel. The occasion was a very pleasant one, features that have marked former entertainments being conspicuously absent.

The Society has selected Los Angeles as the place of next meeting, and all who remember the cordial welcome extended at the last meeting in Southern California will strive to again experience such hospitality. The accession to the membership on that occasion was also a marked feature of the meeting, and the Los Angeles delegation promised as good results next year. DR. LE MOYNE WILLS, the new President, was the choice of his county Society. He is young, active, popular and a good worker, and should be able to make the meeting of '96 a memorable one.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Annual Meeting, March 19, 1895.

The President, W. F. Wiard, M.D., in the Chair.

Election of Officers.—The following were duly elected officers for the ensuing year:

President	C. B. Nichols.
Secretary and Treasurer	J. A. Nelson.
Directors	C. B. Nichols, W. A. Briggs, H. L. Nichols, G. L. Simmons, J. A. Nelson.

New Member.—B. J. Powell, M.D., was duly elected a member of the Society.

Membranous Croup.—Dr. W. H. Baldwin reported a case of membranous croup. The case was first seen on the third day. He gave 25 cc. of antitoxin at 4 P. M. Next morning the child was breathing easier, a large piece of membrane having come away. The temperature was 101° to 103° F. On the third day of the treatment phenacetin was given, also 5 cc. of the antitoxin. The child made a satisfactory recovery.

Dr. G. C. Simmons also reported a case in which he had used antitoxin with beneficial results.

Dr. T. W. Huntington was pleased to find here, as in other places, results which were so positive in the handling of diphtheria. There seems to be no difference of opinion in regard to the efficacy of the immunizing and curative properties of antitoxin. At the New York Infant Asylum, which contains from three to five hundred children, for the twelve months prior to June, 1894, there was a continual epidemic of diphtheria, 10 to 20 cases being on hand all the time. The attendants became discouraged at the number of deaths. When it was determined to try antitoxin, all infected cases were isolated and quarantined. The remainder were examined, cultures were made from the secretions from the throat and the Klebs-Loeffler bacillus was found. The infected cases were then inoculated. The immunizing effect was marked by the disappearance of the bacilli, and the epidemic was stamped out by this treatment. Before this period one building had been burned in an effort to eradicate the plague. According to the latest account they had lost but two cases since the immunizing process had been begun. One was that of a child, immunized eight or nine weeks, that came down with membranous croup. A culture was made that gave negative results. The child was intubed, coughed up the tube—another examination giving negative results. The tube was again coughed up, and also a piece of membrane. The child died of diphtheria. At all institutions where a certain remedy was being much used it was inevitable that, in the large number of cases presented for treatment, many would be mild in character. Conservative professional opinion, however, was in favor of the drug.

Dr. W. A. Briggs reported two cases, the course of which was radically different from the usual order. In membranous croup there is a revolution in the symptoms in 24 hours. In Dr. Baldwin's case, which he had seen, there was the usual evidence of membranous croup or diphtheria. No other treatment was used except ice, and later hot applications. Morphine was given to allay spasms. In fact, no other treatment should be used with it, as the combined toxic effect is injurious to the kidneys. Antitoxin acts by nature's method of curing disease. This consists in the production of an antitoxin, or some material antagonistic to the disease. This line of treatment gives great promise in all the other contagious diseases. These are all self-limited, as the culture medium becomes exhausted. He believed that this was the greatest step in medical science since the days of Jenner.

Dr. W. A. Briggs read a paper on "Puerperal Eclampsia" [to be published].

Dr. F. B. Sutliff said the proper thing to do was to rid the uterus of its contents. Many things were recommended by authorities, some of which it is unwise to attempt. In one case he had bled the patient, and opium was freely given, yet she still had spasms. He also gave pilocarpine, and the patient was nearly drowned in her own saliva.

Dr. H. L. Nichols said: I agree with Dr. Briggs that we often find cases in which no albumin is present, the cause of the convulsions being pressure on the vessels of the kidney. My sheet anchor is the lancet and I rarely fail. The uterus should be emptied.

Dr. J. H. Parkinson: It is not often that the Society has the advantage of listening to such an able paper as that of Dr. Briggs'. Prophylaxis is the most important point in these cases. If watched during pregnancy, many cases of convulsions can be prevented. The presence of albumin in the urine would demand constant watchfulness. The treatment suggested by the author is the best as far as we now know. Blood letting is sometimes useful as a ready and rapid means of relieving arterial tension. It has the sanction of good authority. Veratrum viride accomplishes the same results by "bleeding the patient into her own veins."

Dr. T. W. Huntington: It is the fortune of but few societies to listen to a better paper than that of the author of the evening. It is one to read and carefully discuss.

Dr. L. A. Harcourt: Puerperal convulsions can occur without albumin. Bedford reports a case in which a girl in perfect health was taken, at the seventh month, with convulsions after eating a hearty supper. An emetic was administered and she went on to full term. Dr. Nichols says that he regards bleeding as a sheet anchor, but loss of blood sometimes causes convulsions. In a strong woman with a bounding pulse, a pint of blood could be withdrawn with benefit. In an anemic case blood-letting would increase the convulsions. Interference with the renal circulation by pressure may cause albuminuria.

Dr. Thos. Ross: Bleeding was formerly the standard remedy. It modified the convulsions. Every case, however, must be judged by itself. The indications should be watched, arterial tension relieved and the kidneys restored to their normal function.

Dr. Charlotte B. Brown, of San Francisco: In the Rescue Home at San Francisco, we have had three cases since January, 1895. They were severe, but had been under treatment previous to attendance. As Dr. Parkinson has said, prophylaxis is the great point in these cases. Obstetrics is becoming a specialty, and in the east, amongst the foremost men in that branch, such as Dr. Kelly and others, no one will attend a case of labor unless he has been engaged from an early period in the pregnancy. Thus it happens, that many of these cases go to minor men for treatment, and this, in a measure, accounts for the fatality. Prophylaxis means that the presence of albumin has been noted and that the mental condition of the patient has been attended to. Most physicians use as little medicine as possible. The wet pack at Rescue Home has given us as good results as anything else. Jaborandi has also proved useful. Iron, of course, may be needed in the routine treatment. In a case of threatened convulsions in which I had the case under observation for two months, there was albumin in the urine and great edema. Fluid extract of jaborandi *per rectum* and the application of hot bricks caused profuse sweating and relieved all the symptoms. When convulsions have set in, chloroform and the rapid emptying of the uterus is the proper treatment. In an anemic case of seven months standing, chloroform was administered and labor induced. The child was saved, but the mother unfortunately died. It was a case of chloro-anemia; no autopsy was allowed.

Dr. W. E. Bates, of Davisville: Prophylaxis consists in placing the woman on a milk or liquid diet with a fair allowance of mineral water, which reduces the toxines.

Dr. W. A. Briggs in replying, said: In the case mentioned by Dr. Harcourt in which the patient had eaten a full meal, the convulsions were, in all probability, caused by the accumulation of toxines in the blood. In numerous cases we have convulsions without disease of the kidney.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, March 12, 1895.

The President, C. C. WADSWORTH, M.D., in the Chair.

New Members.—G. H. EVANS, M. D., LESSER HIRSCHKOWITZ, M. D., and CAMPBELL FORD, M. D., were duly elected members of the Society.

The Diagnosis and Treatment of Different Forms of Urethral Discharges.—Dr. M. KROTOSZYNER read a paper upon this subject. He said the method of examination in diseases of the urinary organs is very different from that in diseases of other parts of the body. While diagnostic apparatus may be numerous and perfect, they often cannot be used throughout a severe attack for fear of injury. Until recently any urethral discharge was regarded as gonorrhea. The physician noted the discharge and prescribed an injection to cure it. In good and reliable text-books up to fifteen or twenty years ago the treatment of urethral discharges was very brief, and when gynecology was recognized as a well-established specialty, its sister science (urology) was a comparatively dark and uncultivated field. The investigations upon the etiology of a score of gynecological diseases gave the most active impetus to the study of urethral discharge, especially in the male. On account of the gonorrheal infection of pelvic organs in the female it becomes very important to diagnose not only the urethral discharges at the meatus but those obtainable by other means. To determine the origin of the discharge we have to recall that on the border between the bulb and membranous urethra the muscles, internal sphincter and compressor urethræ exist, which separate the urethra into two distinct well marked portions. Thus any discharge at the meatus comes from the anterior portion, while any discharge originating beyond (posterior to) the compressor will necessarily accumulate in the posterior portion of the urethra. If this is quantitively larger than the space between the sphincters can hold, it will flow back into the bladder because the sphincter internus is less resistant than the sphincter externus. The microscope is necessary in all cases to determine the character of the discharge. Light mucilaginous discharges are often diagnosed as gonorrhea, when there is no symptom whatever of the disease. The glands and mucous membrane of the anterior urethra secrete a discharge very similar to that from the prostate, etc., and used to be regarded as coming from the posterior portion, while it is now proven as having its origin in the anterior portion of the urethra. It occurs in some individuals in large amount as a harmless remainder of a gonorrhea or as due to some irritation. Furlinger, of Berlin, proves that such a discharge comes from prolonged sexual excitement, and calls it "Urethrorrhea Libidine." Such discharges usually grow worse from local treatment. Quite different are our conclusions if we have a cloudy discharge. Here we will find pus-cells, and hence inflammation, Until a short time ago this was regarded as sufficient to call it gonorrhea, but since the discovery by Neisser of the gonococcus we must consider its presence in the discharges necessary in making an absolutely safe diagnosis. I presume that you all are familiar with the character and form of the diplococcus of Neisser, and it is merely necessary for me to recall to your memory the fact that we are as yet in want of a culture-method which is easily and quickly to be obtained by the average practitioner. Since Finger discovered that instead of the blood serum a nutrient agent, the so-called wine agar (1 part wine, 2 parts agar) may be used, we can easier make cultures in doubtful cases. But the busy physician cannot spare the time to make such examinations in every doubtful case of gonorrhea (and there occur many). I have already asserted that the practical side of the gonococcus question will best be settled by the discovery of a reliable double stain for specimens, as is, for instance, the case with tubercle-bacilli. Lately Wright, of Harvard, has published careful investigations upon the character of this diplococcus and considers the fact that the true gonococcus is invariably decolorized by Gram's method as a characteristic feature of the microörganism in question. Practically we should find a great many gonococci, mostly intra-cellular, located in all cases of an acute purulent discharge to permit a diagnosis of specific urethritis. If these microörganisms at repeated examinations cannot be found, we will have to diagnose a simple non-specific urethritis. We might find other microörganisms by which the suppuration has been produced, but the constant absence of gonococci proves the absence of a specific urethritis. While we always find gonococci abundantly in acute or even sub-acute cases, with a somewhat copious discharge, we have to hunt for them repeatedly, and very often in vain, in chronic cases with a scanty discharge. Here the question, whether the discharge is still infectious or not, can only be answered with great difficulty, and other more detailed modes of examination have to be used in order to avoid error. Our opinion must not be based upon the presence of a few cocci of doubtful character. I have on several occasions treated this question extensively, and merely desire to repeat here that with the aid of the modes of examination as I have described them, we are enabled to arrive at satisfactory conclusions in almost all cases. I have treated the question so extensively, because it is a mooted point with many of you, and because I wanted to discuss this question from a standpoint that embraced the whole literature up to date. Of other microscopical features of the gonorrheic pus I have to mention the so-called eosinophilous cells which appear in a surprisingly large number, especially at the acme of the disease. Later investigations will have to determine the true character of these cells. It is my intention to study the macro and microscopic features of the gonorrheic discharge during the whole course of the disease. In the beginning we notice muco-purulent discharge showing microscopically epithelial and pus cells, but only a few gonococci. After four or five days we find a distinctly purulent discharge, where the microscope shows almost exclusively pus cells and a great many gonococci. After about a week we find a more mucous discharge, which again shows epithelia among the pus cells. From the increase of epithelial cells we may diagnose the progressive regeneration of the mucous membrane of the urethra. The gonococci slowly decrease in number and have generally entirely disappeared before the discharge has ceased. All the discharges above mentioned are characteristic of the anterior urethra, while the secretions which appear immediately after urinating, or during defecation, originate from the posterior urethra or its deeper appendages, the seminal vesicles or prostate. You are all familiar with the macro and microscopical features of the normal prostate secretion. By pressing gently but energetically upon the gland from the rectum you can press out a few drops of a milky fluid, which normally shows only a very few leucocytes. Here, also, you may, from the presence of a large number of leucocytes, conclude that the gland is in an inflammatory condition. In ejaculation and some other conditions the prostatic secretion, and the secretions of the other appendages of the posterior urethra, will find their way to the meatus and transmit infectious material to the female genital apparatus. Therefore I strongly advise you to obtain this discharge for microscopic or bacteriological examination, because very often gonococci can be located here where all other methods fail to show them. This should be done in doubtful cases of old chronic gleet, which otherwise do not offer any symptom of disease or any sign of a possibility of infection to the female. You must always have the patient urinate before pressing out the prostate, so as to get rid of all the secretions of the urethra itself. The secretion of the seminal vesicles can only be obtained from diseased or inflamed organs. We generally then conclude that a morbid or insufficient function of the ejaculatory ducts exists. The presence of a number of white and red blood corpuscles demonstrates the inflammatory condition of the vesicles. By the thorough and repeated macro and microscopical examinations of these discharges, heretofore unexplained symptom-complexes can be cleared up and finally cured, and also many diseases prevented being transmitted to females. In treatment I only offer personal experience. I should prefer rest in bed and strict diet, although I hardly think diet is as important as many believe. I prescribe injections in the second stage only. Ricard's old formula in varying strengths is my favorite. I use from the beginning a balsamic internally, an emulsion of copaiba and later on, oil of santal. About 50 per cent. of my cases recover with no complications in four to ten weeks. I am strictly opposed to the so-called abortive treatment. Its bad sequelæ are seldom reported. Lohmstein's methods (of Berlin) I could not believe proved especially effective, and seems liable to wash infectious material back into the posterior urethra. If gonorrhea invades the posterior portion I almost invariably use silver nitrate in different forms. Where I desire to influence the deeper urethral glands, which have been found affected endoscopically, I use thick, heavy rubber bougies, filled with lead and covered with nitrated cocoa butter of varying strengths. If the discharge from the posterior urethra is profuse I get the best results from Ultzman's syringe filled with nitrate of silver solutions of increasing concentration, sometimes as high as 10 per cent. In gonorrheal cystitis I generally wash out the bladder with nitrate of silver solutions. In affections of the appendages of the posterior urethra I can heartily recommend the massage of the prostate gland, which, if cleverly and diligently done, offers very satisfactory results in very old cases.

DR. H. W. YEMANS said simple urethritis is a mucous discharge which the quacks call spermatorrhea. The differences in the epithelial lining accounts for varieties of the discharge. Posterior urethritis is a natural extension of the gonorrheal process. For treatment I prefer alkalies, fluids in excess and rest, and, after the acute stage, irrigation. The stripping operation of the prostate must be done continuously.

DR. L. BAZET said it was not always easy at first to make a diagnosis, for many urethral discharges are rheumatic or due to impotence, etc. The microscope may not show gonococci at the first examination. He preferred the syphon process of irrigation with permanganate of potash solution, 1:5000. He treated them in this manner for twelve or fifteen days, and then a rest. Afterward he used nitrate of silver solution. In chronic cases he used injections.

DR. C. G. KENYON said antiphlogistic treatment for the first few days was most important in effecting an early cure. He found gelsemium with alkalies given to toleration very effective.

DR. J. ROSENSTIRN believed that urethritis is too little regarded as a general or constitutional disease. He recommended local measures and avoidance of violent procedures, with later the thorough use of permanganate solution.

DR. C. G. KUHLMAN said he had been considerably amused to-night by listening to the reading of the paper and to the remarks thereon. This was not only on account of the various modes of treatment recommended, all of which, by the way, are time-honored chestnuts, but also by the references to the gonococcus of Neisser, alleged to be the specific cause of gonorrhea. While we are justified in dividing urethritis into specific and non-specific, basing this upon the characters of the discharge, the symptoms and the response to treatment, still we are not justified in assigning a specific microbe as the specific cause of this disease, for the following reasons: (1) A microbe answering the description given by Neisser has been found in less than 50 per cent of cases of clinical gonorrhea and then never alone, but with others, as staphylococcus, streptococcus prodigiosus, bact. coli commune. (2) Pure cultures of a microbe answering Neisser's description have never been obtained. (3) Researches on polymorphism of the bacterium coli commune has developed the following facts: (*a*) This scavenger of the alimentary canal invades the organism during retrograde processes and can be found within the parenchyma of every organ immediately after or before death. (*b*) Microörganisms regarded as the specific cause of infectious diseases cannot be distinguished from the polymorphic forms of the bacterium coli commune. The readiness with which the neuclei of the leucocytes found in gonorrheal discharges color with eosin and methyl-blue is no doubt due to certain changes the leucocytes have undergone in their struggle with the specific poison of the disease.

DR. KROTOSZYNER, in replying, said the gonococcus must be accepted as the cause of gonorrhea. When other means fail, by having the patient urinate in two glasses and then pressing out the prostate and urinating in a third glass, you may get the gonococcus.

Vaginal Hysterectomy—Double Pyosalpinx.—DR. C. G. KENYON exhibited a specimen from a case of vaginal hysterectomy which did not do well, the patient not having recovered from the anesthetic. The heart acted badly and she only survived twenty-six hours after operation. He also exhibited a specimen from a case of double pyosalpinx that had been removed with satisfactory results.

Entertainment of the State Society.—The following committee was appointed on entertainment of the State Society, with the understanding that the County Society would be responsible for any deficit that might occur: H. H. Hart, J. H. Barbat, G. W. Davis, G. J. Fitzgibbon, F. B. Carpenter.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, February 4, 1895.

L. C. LANE, M.D., in the Chair.

New Members.—The following were duly elected members of the Society: HERBERT N. BLOCK, M.D.; A. C. COLLINS, M.D.; BRUCE FOULKS, M.D.; —— McCORMICK, M.D.; J. MORA MOSS, M.D.; AVRON NEWMAN, M.D.; A. G. ROSENTHAL, M.D; J. HOWARD THOMPSON, M.D.; E. N. TORELLO, M.D.

DR. EMMET RIXFORD read a paper on "Chronic Ulcers, and their Treatment by Thiersch's Skin Grafting."

DR. K. PISCHL suggested that in stopping troublesome oozing from wounds in cicatricial tissue hot water might be used with advantage.

DR. BASIL NORRIS said every army surgeon sees a great many chronic ulcers. He had found strapping with adhesive plaster to answer very well as a means of cure. He also thought much of Martin's rubber bandage.

DR. LAWRENCE BOIDO referred to ulcers which had recently come to his attention in Guatemala. The people drink quantities of a virulent liquor—machiche—and this produces formidable ulcers. These may be readily cured by stopping the drink.

DR. L. C. LANE said that during his service in the hospital at Quarantine, Staten Island there were many old sailors, and nearly every one had chronic ulcers. Where efforts were made to cure them they would scratch the ulcer and undo at night what the surgeon had done during the day. The older method of skin grafting which we owe to Reverdin, one of two brothers who lived in Geneva, contained the germ which has developed into this more perfect process of Thiersch. It was at one time stated that dry epidermis dusted on a granulating surface would live, but this has not been verified. There is some pain in cutting off skin for grafting, even in such small pieces as are used by Reverdin. A Portuguese had a great ulcer, the result of a burn, which required grafting. The man wanted to know if the skin might not be taken from his wife. The patient woman offered her skin, and the lord of the household accepted it. Skin from animals has been used to cover breaks in the cutaneous surface in man, notably that of the frog and the chicken.

DR. HENRY GIBBONS, JR., reviewed the subject, and said that he considered Thiersch's method of skin-grafting one of the most valuable additions to modern surgery.

DR. RIXFORD in replying, said he had tried hot water to stop oozing from the surface left after excision of an old ulcer in two other cases, and had found that the grafts did not do well. He explained this by supposing that the degree of heat required to coagulate the blood in the vessels, coagulated the albumin in the cells all over the surface, preventing proper percolation or osmosis of fluids from which the transplanted epithelium was to derive its nutriment. If in removing an old ulcer sufficient tissue is cut away, a region is reached where the vessels are large and few in number. Here, too, the vessels are not so bound down by hard cicatricial tissue as to prevent their collapsing when cut. By circumscribing an ulcer with a cut reaching the fascia beneath it the ulcer may be peeled off base and all, and then there will be no trouble with the hemorrhage; a few ligatures about a vessel or two will take care of it, and the grafts will flourish better than on a surface made up of scar tissue. Some had recently advocated the use of antiseptics in preparing a surface for the reception of grafts, but he was inclined to oppose it on the ground that antiseptics strong enough to destroy or even inhibit the growth of bacteria would injure not only the delicate living epithelial cells on the under surface of the grafts, but would injure the cells forming the surface on which the grafts are placed, thereby interfering with the nutrition of the grafts.

Voluntary Alteration of the Position of the Abdominal Viscera.—DR. ALBERT ABRAMS exhibited a patient who had the power of voluntarily altering the positions of his abdominal viscera, as was shown by percussion and palpation. The patient could also perform a remarkable series of motions with his stomach, as was demonstrated to the Society by electrical transillumination by means of the gastro-diaphanoscope. Among other interesting feats the patient could swallow air and produce a so-called phantom tumor.

Dr. R. W. Murphy wanted to know where the practical side of this illumination of the stomach came in.

Dr. Abrams said: "He who diagnoses well, cures well." The gastro-diaphanoscope has recently been perfected in Germany, and has been extensively employed in diagnosis. With it can be located the boundaries of the stomach, tumors that happen to be between the stomach and the abdominal wall, and with it can be determined the thickness of the anterior wall, the motility of stomach, etc.

Dr. L. C. Lane said the most interesting thing demonstrated in this case is the remarkable mobility of the stomach. Some one spoke of percussion of the kidney. Piorry, the great champion of percussion, in his book "Le Medicine de bon Sens," a book which it would pay anyone to read, has a chapter on percussion of the kidney. He claimed that not only could the outline of the kidney be determined, but its condition of health or disease.

Dr. Basil Norris said that he was in Paris when Piorry was still alive, and attended some of his lectures. It was said of him that he could determine whether his friend was in his room or not by knocking at the door.

Dr. Isaac Rivas said that he didn't like to be beaten in a story, and told of some of the feats of the Indians in Mexico. One fellow—and there were many witnesses of the fact—could swallow a number of coins of different dates, and could pick out any one called for and regurgitate it alone. Another Indian, to avoid having an important letter found on his person, carried the letter to its destination in his stomach and there brought it up.

Regular Meeting, March 4, 1885.

C. N. Ellinwood, M.D., in the Chair.

New Members.—B. F. Alden, M.D., and Lawrence Boido, M.D., of San Francisco, were duly elected members of the Society.

Cerebral Abscess following Otitis Media.—Dr A. Barkan reported a case of "Cerebral Abscess, following Suppurative Otitis Media." Dr. Barkan then read a number of extracts from the newly published work of McEwen on "Suppurative Diseases of the Brain," laying particular stress on the account there given of the symptomatology of abscess of the brain, and on the remarkable results obtained by opeartive measures in the hands of the author. The speaker heartily endorsed the book.

Dr. Emmet Rixford said he had assisted at the autopsy on the case and was struck by the fact that pus was found in the lymphatic spaces beside the vessels of the pia mater on the opposite side of the brain, as well as on the side where the abscess was located. This was more marked on the surface of the cerebellum than the cerebrum. Probably the opisthotonos and other symptoms of meningitis the child had had were due to the presence of this pus. Another interesting fact is that the suppurative disease of the brain occurred immediately over the petrous portion of the temporal bone without visible perforation of the bone and with no other lesion of the dura mater than a slight localized thickoning and congestion.

Dr. J. O. Hirschfelder reported a case of "Cerebral Abscess, the Remote Result of a Penetrating Wound in the Skull."

Dr. L. C. Lane said he had listened to the paper with a great deal of interest. McEwen is one of the most famous of modern surgeons, by whose name we now know a number of classical operations. He is a most busy man. Books like his are of greatest value, because they are the expression of the author's own experience. The little diagnostic points by which disease within the brain is located are full of meaning. The speaker had long ago learned to regard a slow, full pulse as characteristic of compression of the brain, generally produced by some small addition to its volume. Leyden found that by opening the skull of a dog and making compression he could produce at will this slow, full pulse. In his own practice he had seen a number of cases of abscess of the brain. Twenty-five years ago a man came to him from Virginia City with symptoms of compression of the brain. A portion of the skull was removed and pus evacuated. The man lived a number of weeks, regained his intellect, but finally died. There was an immense cavity in the brain. In the matter of peculiar chromatic hallucinations, he remembered a case of cancer of the breast, which had recurred. The patient had peculiar visions—when she looked to one side she saw a series of rainbows. At the autopsy there was found a large cancerous growth on the side of the brain in the occipital lobe, and it also encroached upon the cerebellum. There was no pain accompanying it. The report read of McEwen's operations is wonderful. It is remarkable how long a man can live and retain his faculties with an abscess in the brain. Eight or nine years ago Schroeder, a prominent German gynecologist, died. Virchow made the autopsy and found a great abscess in the brain, which was referred to an infection which had occurred several years ago, and here this man had been able to perform his duties, to lecture to students, and perform surgical operations, with an intellect scarcely affected, for a number of years, and with a large abscess in the brain.

DR. BARKAN said McEwen refers to the slow pulse as occurring in compression of the brain by abscesses and tumors, but notes that the sign is wanting in those abscesses which merely take the place of lost brain substance without appreciable increase in the volume of the brain. A case had come under his charge in the German Hospital with otitis media of three weeks' duration. The drum head had perforated and given vent to a profuse discharge of fetid pus. The mastoid was normal. Three days later the discharge stopped, and suddenly the intellect was impaired and the boy died. There was found a very large abscess of the cerebellum.

DR. F. Z. BAZAN said he had had a case of fracture at the base of the skull resulting in abscess with meningitis. The autopsy showed an immense abscess. He had had considerable experience in operating on the mastoid or middle ear disease. In every case he had succeeded in obtaining a cure. He simply takes a small drill and bores through the mastoid towards the middle ear. Such an opening will give ample drainage. There is no necessity of removing bone when it is not diseased.

Thrombosis of the Inferior Vena Cava.—DR. EMMET RIXFORD reported "A Case of Thrombosis of the Inferior Vena Cava with Chronic Abscess of the Liver."

DR. J. O. HIRSCHFELDER said the case is a remarkable one in a number of respects. Thrombosis of large veins following typhoid fever is not rare; he had seen a number of cases of thrombosis of the femoral. In looking over the literature of the subject, he had found an exactly similar case reported in the *Archives de Physiologie Normale et Pathologique*, 2 series, v. 1, p. 897, by A. Robin. The case was one of complete obliteration of the inferior vena cava in a man aged 68, who died in May, 1874, in the Hospital Beaujon. In June, 1853, the patient was seized immediately after severe exertion, with intense pains in the lumbar region, accompanied with fever, constipation and meteorism. After four or five days the fever ceased; edema of the ankles set in and a scanty blood-red urine was passed. A short time after, general edema, involving the face as well, developed, and the urine was found to contain albumin. After four months, the edema gradually passed off. The patient remained weak, so that he kept his room for two years. Six months after the beginning of the trouble, he observed a gradually increasing swelling of the veins of the abdomen, and those of the thorax enlarged to thick cords. Two years later he had so far recovered that he could attend to his affairs, with occasional interruptions, due to edema of the lower extremities. In 1873, the edema became permanent, and ulcerations of the lower extremities developed and dyspnea. The patient died of erysipelas. At the autopsy, the diagnosis of obliteration of the inferior vena cava was confirmed. The vessel was changed from the bifurcation to the point of entrance of the venæ renales into an irregular cord about the thickness of the little finger, and was firmly bound to the surrounding tissues by firm fibrous bands. In its interior a mass of calcareous matter was found extending into the venæ iliacæ communes to the iliacæ externæ obliterating these vessels completely. The dilated right vena renalis passed but a small quantity of the blood through the vena cava. Most of it passed through the venæ diaphragmaticæ with the veins of the supra-renal capsule. The left vena renalis was entirely closed toward the vena cava.

Formalin as a Fixation Fluid.—DR. A. G. ROSENTHAL presented some pathological eye preparations fixed and hardened in formalin. He had found this medium to have a number of advantages over alcohol and Müller's fluid, in that it hardens much more rapidly, without contracting and distorting the tissue and without discoloring it. In fact, it preserves the normal colors most beautifully.

DR. EMMET RIXFORD said those who used the microscope welcomed the advent of this hardening medium, for there are many disadvantages connected with the most of the fluids now in use for that purpose. Alcohol must be so used as to harden quickly, else it will not properly fix the tissue, and besides, it causes contractions; it destroys delicate cell structures; it hardens unevenly, the outer layers being made harder than the deeper. Müller's fluid hardens but very slowly, and requires a great deal of attention, though it preserves the tissue well. However, the chromate it contains interferes with some stains and gives a yellow color to the tissue.

DR. A. BARKAN said that formalin would be much used in preserving museum specimens, for it is efficient in a 1 per cent. solution and is then much less expensive than alcohol.

DR. L. C. LANE spoke of osmic acid as a fixing medium, and said that he had attended lectures by Huxley, when he showed that infusoria are so quickly killed with osmic acid that they have not time to change form. They are caught and fixed instantly under the microscope in the exact positions they happen to be in when the drop of acid reaches them.

THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Twenty-fifth Annual Meeting, held in San Francisco,
April 16, 17, 18 and 20, 1895.

FIRST DAY—TUESDAY, APRIL 16—MORNING SESSION.

The Twenty-fifth Annual Meeting was held in Golden Gate Hall, the Society being called to order by THE PRESIDENT.

Address of Welcome.—C. C. WADSWORTH, of San Francisco, the Chairman of the Committee of Arrangements, said: Mr. President, Ladies and Gentlemen of the Medical Society of the State of California: It becomes my duty, and it is certainly my pleasure, to welcome you to another annual meeting and to invite your earnest coöperation in the investigations held by this Society in the interests of progressive medicine, as well as in the business matters that may be presented for your consideration. This hall, so complete in its appointments, has been secured with a view to your comfort and pleasure, and the latter, to our minds, is one of the most important features of our annual assemblies, as new acquaintances are formed and old friendships cemented. Those of you who find leisure to visit our hospitals and other public institutions will be cordially welcomed. We would also call your attention to the exhibits in the banquet hall in the basement of this building. The exhibitors have spared no pains to make an interesting display. On Thursday evening, as a fitting close to your labors, the San Francisco County Medical Society will honor itself by inviting you to a banquet at the Palace Hotel. In conclusion let me again express a sincere welcome to one and all, hoping that this, the twenty-fifth session, may prove most successful, interesting and profitable.

Annual Address.—The Annual Address [published at p. 239] was then read by the President, G. L. SIMMONS, of Sacramento.

AFTERNOON SESSION.

Committee on Indigenous Botany.—W. P. GIBBONS, of Alameda, the Chairman of the Committee, read this report. He had taken as the subject of his paper "The Relation Between Alkaloids, Atropine, Hyoscyamine and Daturine." Of these, datura stramonium is the officinal species. This drug has long been known as a powerful narcotic poison, but it fell into disuse particularly on account of its dangerous properties, being replaced by atropine, which scarcely less dangerous, was better understood by the profession. The three alkaloids, daturine, atropine and hyoscyamine have been shown to be identical or nearly so, in composition and in action. The use of stramonium at the present time is almost limited to cases of asthma. The speaker said he had often used the fresh stramonium leaves in cases of painful hemorrhoids with good success. An officinal plant possessing such marked therapeutic properties should not be dismissed with but a passing notice. Possibly its very activity and dangerous sequences from overdoses may have contributed to consign it to disuse. The symptoms of an overdose of either of these three alkaloids were much the same. There were, however, some difference in the symptoms relating to the individual drugs. These were described at length. In conclusion, he saw no reason to doubt that the multiple species of datura on this continent had been derived from seeds of the one kind originally introduced. It was also most probable that all these species possess the same marked properties, differing only in degree. In furtherance of investigation of this subject he said that Mr. F. Binder, an Alameda pharmacist, was preparing a fluid extract from the root, which he would be happy to distribute amongst physicians desirous of trying its effects on cases where the solanaceous alkaloids were indicated.

DR. A. L. LENGFELD, of San Francisco: I believe that Dr. Gibbons deserves more than the usual amount of credit for his careful investigation of this plant, from the fact that on this coast it is so extremely difficult to undertake any original investigations. We are so far away from any laboratories which permit us to test our remedies; so far away from any libraries or sources of information to enable us to find out what other investigators have done in any direction, that any person who, like Dr. Gibbons, undertakes a work of this kind deserves more than the usual amount of credit. Datura stramonium was at one time very extensively used, but became obsolete, so much so that I remember in 1890, at the meeting of the Committee for the Revision of the Pharmacopeia, strong efforts were made, and almost successfully so, to omit stramonium and its preparations. Stramonium is an active remedy, but belladonna and hyoscyamus and their alkaloids seem to have entirely replaced it in the medical profession. Probably of the three remedies hyoscyamus is the one most frequently used; belladonna next, and stramonium rarely or never. Of the alkaloids, atropine is the most frequently employed, but its use appears to be confined to ophthalmic practice, while hyoscyamine and hyoscine appear to be the alkaloids used in the treatment of nervous disorders and certain forms of insanity; the largest quantities being used in our various insane asylums as sedatives and hypnotice. As to the reason why daturine has been neglected I cannot answer. As to its relative merits and advantages as compared to the others, of course only physiological or clinical investigations can inform us. In this State we have no truly physiological laboratory. We hope, however, that with the appropriation so kindly given by the Legislature to the University of California that in their new building they may have a physiological laboratory, where these remedies or suggestions, such as were thrown out by Dr. Gibbons, may be tested and verified. I personally believe that new remedies should be first tried in a physiological laboratory before being applied in clinical practice; but the suggestions thrown out by the doctor are certainly deserving of consideration, especially by those engaged in the treatment of nervous diseases, more particularly in order to see whether stramonium can replace or whether it has any advantages over the preparations of hyoscyamus and belladonna.

DR. R. G. REYNOLDS, of Upper Lake: I was particularly interested in Dr. Gibbons' very excellent discourse on the history of stramonium from the fact that it has for a long time been a friend of mine, and it is one of the few remedies that I take pleasure and delight in always growing. I invariably have a few seeds planted in my garden, where I can have the fresh leaves to use in my practice. I have found them the most soothing application in the case of abscesses in any place. The doctor mentioned particularly their good effect in hemorrhoids, but they are useful in all kinds of abscesses, and particularly in abscesses on the fingers, around the roots of the nails, in the affection commonly called run-arounds, which sometimes are extremely painful. By taking a few leaves from the stramonium and bruising them, or first heating them by throwing them on a hot stove and pouring boiling water over them, then slightly bruising them, and binding up the painful part, the pain subsides immediately.

I have frequently seen people that were writhing in agony and could not sleep immediately lapse into slumber and have no more pain during the night. It seemed to so effectually allay the inflammation that a few applications would frequently take away all the soreness.

Committee on Histology and Microscopy.—The report of this committee was read by the Chairman, J. H. WYTHE, of Oakland, the subject being "A Review of the Cell Doctrine." He said the history of medical science proves that a rational conservatism has always been its prominent characteristic. It has drawn the line clearly between science or a knowledge of facts and theory, or the attempt to explain facts by philosophy. A review of the cell doctrine in physiology and pathology will illustrate this principle of scientific conservatism. There seems to be a charm to some minds in the philosophic idea that all the variety of things in nature must have their origin in a common elementary unit, although the truth of such an idea is assumed rather than proved. As modern chemistry has dispelled the illusion of alchemy, so modern biology compels us to part with protoplasm, since it has discovered organized materials still more elementary. The speaker then reviewed the theories that had been held regarding the construction of organized bodies from the era of Hippocrates until the discovery of the microscope. This opened up new fields, and various painstaking investigators demonstrated the minute structures of plants and animals. In 1838 Schleiden and Schwann first announced the doctrine of the cell, and while their views respecting the origin of cells were untenable, yet this does not detract from the importance of their researches. Barry, Henley, and others modified the exogenous and endogenous cell formation theories of Schwann by showing that cells multiply by budding and self-division. In 1835 Dujardin found that infusorial and other low organisms were formed by a gelatinous, contractile substance which he called sarcode, and in 1861 Schultze showed that sarcode is similar to the contents of the primitive animal cell, and proposed to call it protoplasm. As microscopical observations multiplied, it was found that many cells occurred without either neucleus or cell wall, so that the term cell came to represent a particle or mass of protoplasm. This latter was regarded as a sort of primitive organizable jelly, and Huxley gave it great prominence by calling it the physical basis of life. In 1858 Virchow published his "Cellular Pathology," in which he clearly established that every cell originates from a previously existing cell. This is true of all physiological and pathological processes, and forms the basis of the greater part of modern medical science. The great improvements in the microscope have shown us that we can no longer regard the protoplasm of the cell as the primeval, organizable material. What was called protoplasm has now been shown to be a very complicated structure, made up of a network of fibres more or less delicate, the structure and chemical composition of which are unknown. In the meshes of the network is a watery fluid, and among the fibres numbers of granules just visible to the highest powers which move to and fro with ceaseless activity, although too small to show structure with our present miscroscopes. There are strong reasons for believing that they are composed of still minuter parts lying beyond our vision. In the neucleus there seems to be a concentration of vital power and a repetition of structure still more complicated than in the body of the cell. Karyokenesis is now recognized as the usual mode of cell reproduction. It is, therefore, apparent that the cell is an elaborate piece of machinery constructed so as to manufacture other pieces of machinery either like itself or differentiated for various functions.

DR. C. G. KUHLMAN, of San Francisco: I cannot agree with the author as to the history of the subject. Human histology may be said to be the outgrowth of biology, and a very late outgrowth of that general subject. Prior to 1668, when Francis Reddy promulgated his remarkable doctrine, the doctrine of spontaneous generation was universally accepted by the scientific world. There is absolutely no history prior to that date. Francis Reddy's hypotheses were based upon certain researches into the ova of the blow-fly. In 1777 Boffeine and Nathaam showed that heated and sealed animal and vegetable infusions did not undergo putrefaction; that putrefactive changes depended upon the presence of germs. This led on to the study of microörganisms. The earliest bacteriologists were Heckel and Müller, who described several species of primitive microscopic forms in 1773. Ehrenberg, in 1830, was the first one to group microörganisms. He grouped seventeen species and described their physical and physiological characteristics. In 1838 Schroder filtered microbes through cotton wool. Pasteur has got the credit of being the first one to lay down the doctrine of germ putrefaction, but the honor belongs to Hillensleck, who demonstrated this in 1843. Pasteur did not demonstrate it until 1857 and 1862. He demonstrated in 1857 that fermentation was due to a special microörganism. Human histology took its origin, as it were, in 1858, when Berghow borrowed the hypothesis of Francis Reddy, or rather formulated an altered hypothesis, to the effect that there could be no life without antecedent life, or no cells without antecedent cells. Sleyden was the first one that promulgated the theory that all cells originated from preëxisting cells, and to him belongs the honor that Berghow is reaping to-day. The statements made by the author of the paper in regard to karyokenesis are true in some respects, but they do not explain the origin of cells. I do not think we can apply the cell doctrine as based upon the researches into vegetable cells and into the so-called schizomycetes to human histology, because we have no original protoplasm in the human body. All the histological elements of the cells, as it were, are composed of two parts, differentiated and undifferentiated matter; the nucleus or forming and the formed matter. The nucleus (or nucleii) is held to be undifferentiated matter, and the granular portion of the cell to be differentiated matter—matter that has undergone changes. Hence there is no such thing as a primitive histological element. So far we have not observed in nature a primitive histological unity—a primitive histological and physiological unity, as it were. All the cells that we know to-day consist of this differentiated and undifferentiated material, and hence we cannot apply the physical and physiological characteristics manifested by vegetable cells and by fungi to animal cells, because they have undergone certain changes during evolution of the body. We must regard organic forms as of different chemical composition and evolution. We cannot say that any particular genera or species have originated from a common protoplasmic mass. Each species manifest different physical and physiological properties which separate them, and which demonstrate beyond a doubt that whatever their origin may have been, the origin was differential, and their evolution into functionating beings has also been on the lines of differentiation.

DR. WYTHE, of Oakland: My object in giving this paper to the State Society and in puttng it into print was to excite a little study in that direction, because I am sure we are on the eve of a revolution in medical philosophy, and it is wise for us to meet the case as science now puts it. That was my object, and that is all I need to say.

Histological Facts that Seem to Influence the Extension of Some Diseases.—THOS. F. RUMBOLD, of San Francisco, read a paper upon this subject. For a number of years he had thought that histological facts offered a more satisfactory explanation than any other for the sudden appearance of certain diseases. This was especially true of asthma and pulmonary diseases. It was also seen in the sudden extension often observed in pleuritis, and pneumonitis, and in enteritis and peritonitis. The temporary barrier which he believed existed, and which for the time prevented the extension of diseases from diseased conditions, or from organs in juxtaposition, having so little influence upon each other with regard to their morbid condition, could only be understood by considering their embryonic origin. In the speaker's opinion, this was the solution of the mystery. The fact that the lungs are formed from the endoderm was, in his opinion, the barrier which prevented the disease from affecting the pleura, this membrane being formed from the mesoderm. It could hardly be supposed that the same peculiarity occurring in at least six diseases was a mere coincidence. It rather seemed to be a law and the same law. The point he wished to make was that the original embryonal tissue formation had great influence in directing the course of disease.

Committee on Pathology.—The report of this Committee was read by the Chairman, J. C. SPENCER, of San Francisco, the subject being: "Personal Observations in the Realm of Pathology." He said he preferred to appear as an original investigator rather than as a compiler of extracts. He therefore desired to present some personal observations in pathology, taking first a series of cerebral lesions occurring in the Children's Hospital, each of which came to the autopsy table. *Case 1* was a small round cell sarcoma occurring in a female 42 years of age. The tumor lay on the right side of the cerebrum, at the line of junction between the post-central and occipital convolutions. The clinical history showed that eight months prior to admission she suddenly experienced a severe pain in the back of the head. Loss of consciousness followed, lasting several hours. Upon recovering she could neither articulate nor swallow. There was total left hemiplegia. These conditions completely disappeared in a few days, the only symptom remaining being constant headache. *Case 2* was one of cerebral abscess in a woman 30 years of age. On the left side of the brain in the fronto-parietal region there was a cavity between the pia mater and dura mater, the brain substance underneath and as far as the lateral ventricle being gangrenous. Seven years previously this patient had suffered from severe headaches, accompanied by vomiting and momentary attacks of blindness. These became more frequent, and prior to admission the blindness became complete. There were attacks of tingling and numbness in the right upper extremity and various attacks of paraphasia, always affecting the right side. The lesion was diagnosed as over the motor area on the right side. The patient was trephined, but, owing to syncope, search for the supposed growth had to be discontinued. *Case 3* was one of acute general miliary tuberculosis in a boy 4 years of age. Owing to the ignorance of the parents the clinical history in this case was very meager. *Case 4* was one of cerebral syphilis in a male child 4 years of age. There was an excessive amount of serum between the pia and dura meter. Both lateral ventricles contained a large quantity of clear serum, the whole brain giving a sense of fluctuation. In the right half of the cerebellum there was a large cyst. The child's history, which was clearly syphilitic, dated back one year. It commenced with nervousness, followed by loss of control of both extremities. In four months he had become totally blind. Ophthalmoscopic examination showed secondary atrophy of both optic nerves. The head was very much enlarged; patient died with convulsions. The speaker said another subject of paramount importance and interest was the treatment of inoperable malignant growths with the toxines of erysipelas and prodigiosus. Since February he had, through the courtesy of Dr. Krotoszyner, been treating two cases in this manner. The first was one of scirrhus carcinoma of the left mamma in a woman 48 years of age. In seven months from the date of the operation there had been three recurrences, the last being in the supra-clavicular fossa. Operation for this showed that the mass communicated with several others in the neck and in the anterior mediastinum. Injections of the combined toxines were used, beginning with six minims. There was no perceptible reaction until the dose had been increased to forty minims on the sixth day, when there was moderate reaction consisting of severe chills, great cardiac and thoracic oppression, with intense dyspnea. The injections were made into the periphery of the tumor and into the infiltrated tissue over the recurrent growths. The patient became progressively worse, and died with symptoms of acute cerebral edema. At the autopsy numerous matastases were found; one mass had diminished about one-half in size. The second case, which was still under observation, was one of epithelioma occupying a large portion of the floor of the mouth; particularly on the right side. This patient was receiving about ten minims every second or third day, injected sometimes into the growth, sometimes into the periphery. This was always followed by a sharp reaction; at first, the tumor had somewhat increased, but laterally it had decidedly decreased, and he hoped for a favorable result.

Dr. C. G. Kuhlman, of San Francisco: The author has not told us what kind of antitoxines he used in injecting the tumor, nor has he told us what relation exists between tumors and antitoxines, hence I cannot consider his method a rational one or a scientific one. A therapeutic method, in order to be scientific and rational, must be in direct relation to the cause of the disease, and I for one am ready to denounce any therapeutic method, which does not bear a relation to the cause, as unscientific and unwarrantable. The literature of the world to-day upon the subject of antitoxines is such that no man is warranted in injecting a human being with toxine, because it has been shown beyond a doubt that toxine poisons the organism and complicates the disease by setting up inflammatory conditions which injure important functions, such as those of the heart, liver, kidneys and spleen. One injection of antitoxine has produced albuminuria and death in children, and I certainly think that the death of the author's first patient was due to the injection of toxine, and that the other one will probably die from the same cause if he keeps on injecting toxine. There is one prominent symptom the author has enumerated in connection with this matter, that of heart failure, which is one of the most first and prominent symptoms of collapse in the treatment of toxine. The toxines directly affect the heart and the centers in the brain. Injections of toxine produce a chemical decomposition of the blood of human beings. In all conditions where toxines have been injected into human beings we have had skin symptoms and nephritic conditions which ought to be sufficient to deter us from such practice as we cannot explain in a rational manner. There is absolutely no excuse for any one to use that treatment at this late day, because all scientific data and the expressions of scientific men in the leading centers of the world, the old world and this world, are such as to banish forever such therapeutic methods from our practice.

Dr. T. F. Rumbold, of San Francisco: I have had four months' experience with toxines. Of course the result was death. But I am satisfied that when a human being finds that eight operations are not likely to cure a case, he will grab at any kind of a straw that seems to give benefit, and will continue the use of that remedy as long as life lasts. The use of toxines in the case I speak of--a sarcomatous breast—commenced on the 7th day of August. There had been eight operations during the two and a half years previous. Dr. Martin made the first injection. We used two minims, and the result was, in half an hour, quite a chill with a rise of temperature to 102° in an hour and a half from the injection. In 24 hours from that time it was evident that the growth, which had before that been rapidly increasing, was reduced. On the second day two more minims were injected. Every time the injection was made, in the highest portion of the tumor, it was followed by a chill in a half an hour, and the temperature went up, but not quite as high as the time before. In 24 hours reduction was manifested. Those injections were continued every other day; the first two days two minims, the next two days three minims, and the next two days four minims, and kept increasing that way. Dr. Martin stated that the growth had very materially decreased, and by the middle of September there was hardly anything there at all. The tumor softened and liquefied. The disease then began to show itself in the axilla of the right arm. The injection was made there, and we kept on increasing the dose up to five minims twice a week. The growth kept increasing, and the patient died in the end of November. The *post-mortem* examination proved that there were metastases in the lungs, liver, kidneys, and excretory glands. There is no question that the toxines had a manifest beneficial effect. From the first injection received by the patient not one particle of pain was felt from the breast. Previous to that time hypodermic injections of morphine had been necessary for about three months.

Dr. Spencer, of San Francisco, in replying, said: I was rather surprised to meet with such violent and unconditional opposition on the part of Dr. Kuhlman. He has announced himself as objector-general on most subjects, and of course it was hardly to be expected that the subject upon which I have spoken would escape his general objection. He has made some sweeping generalizations and some very incorrect statements. I do not know from what source he has derived his information, but if he keeps himself in touch with the experience of the last few months in the use of some of these so-called toxines or antitoxines, he cannot have failed to have seen that the results are not what he has stated them to be. I will not attempt to remember the exact number of cases examined by Riscoe in the Pathological Institute of Vienna, which have been injected with antitoxine, and in none of them was nephritis developed. His statement that the patient died from the use of toxines, is simply his own impression. It is surprising that one of our colleagues would get up in a meeting of the State Medical Society, and with a wave of the hand sweep away a remedy which has been acknowledged—at least not the toxines that I have referred to, but the antitoxines which have been prepared by Behring—to have reduced the mortality in that line 40 per cent.

Dr. Kuhlman, of San Francisco: It has increased the mortality in the city of Berlin from diphtheria 30 per cent.

The Status Presens of Antitoxic Blood Serum.—C. G. KUHLMAN, of San Francisco, read a paper upon this subject. He said antitoxic blood serum is the outgrowth of experimental pathology, especially of that inquiry which seeks to explain the *modus operandi* by which an organism is rendered immune for a period of time after passing through certain infectious diseases. It would appear, in this case, that history was repeating itself. For many centuries prior to 1799, when Jenner introduced vaccination, inoculation, with the serous contents of small-pox vesicles, was employed as a preventive. Diday, however, was the first to call attention to the immunizing properties of blood taken from an organism that passed through an infectious disease. In 1849 he reported to the Paris Academy of Medicine that he had prevented constitutional symptoms in 15 out of 16 patients suffering from primary chancre by injecting them with blood taken from the skin covering a tertiary periostitis. Since then Raymond, in 1877, and Hericourt and Richet, in 1888, had investigated the subject further, the former in relation to vaccination, the latter in connection with septicemia. Pasteur, who claimed to have rendered animals immune against anthrax, believed that this depended upon the exhaustion of the proper nutrient material for the microbes. Some contagions possess special characteristics, as in tetanus and diphtheria, where the poison remains localized and death is the result of systemic invasion by toxic substances generated *in loco*. The speaker then entered at length into the investigations of Roux, Kitasato, Behring, and others in connection with the various immunizing serums, giving the general conclusions reached by them. Regarding the nature and chemical composition of so-called antitoxine, but little was known, though certain characteristics had been ascertained. How the so-called antitoxine is formed in the serum, and upon what its preventive and curative properties depend, is as yet unknown. Antitoxine therapy is the direct outcome of violent opposition to Metchnikoff's phagocytosis teachings, by Koch and his disciples; in fact, chemical versus physiological processes. The reasons for the respective theories of Behring and Tretchnikoff were then given at length. To a great extent many of these reasons were hypothetical, still the effort to solve the problem of the *ves medicatrix naturæ* had not been entirely in vain. Antitoxic diphtheria serum has been tested extensively during the past five years, and we are now in a position to pass judgment upon its merits. Diphtheria serum has been thoroughly tested in Berlin, the home of its promoter, and the expressions of leading Berlin physicians who have thoroughly tested it in thousands of cases during this five years, may be taken as the best available data upon which to base a conclusion. The speaker then criticized the treatment under the heads—immunity, cure, harmlessness, citing his authorities therefor. The mortality statistics for Berlin, from 1890 to 1894, were also given. From a study of these statistics the speaker concluded as follows: (1) The direct introduction of toxic substances and immunized serum into the organism had been employed for many centuries. (2) The etiology of infectious diseases is as yet *sub judice*, and therapeutic methods based upon the assumption that infectious diseases are caused by specific microörganisms are fallacious. (3) So-called antitoxic serums neither prevent nor cure infectious diseases, but are dangerous compounds, giving rise at times to serious disturbances.

Committee on Clinical Medicine, including Diagnostics and Therapeutics.—The report of this Committee [published at page 248] was read by the Chairman, DAVID POWELL, of Marysville, his subject being: "Malaria, Its Cause and Effects."

DR. W. WATT KERR, of San Francisco, in opening the discussion, said: I fully agree with Dr. Powell when he contradicts the statement made in a recent work upon the practice of medicine that malaria or malarial diseases are rare upon the Pacific Coast. Some of us see enough malaria every day to contradict this. Malarial diseases are not confined to the San Joaquin and Sacramento valleys, but we have it in abundance in San Francisco. A short time ago there appeared in one of our local papers a statement made by two or three different physicians that malarial diseases were non-existent in San Francisco, because we had no marshy soils; that we were free from those conditions that appertained to the San Joaquin valley. One of the great difficulties in discovering the true cause of malaria, I think, lies in the fact that the profession has been too liable to look for this disease simply in marshy soils and in brackish water, whereas we know that it exists in soils such as in Hongkong, which are entirely of granite formation, perfectly free from any marshy conditions; that it exists in the plateaus of Castile, and in the Himalayas. In San Francisco we not only have the remittent and intermittent fevers, but we have them of a very virulent type. This year we received at the hospital quite a number of cases from a grading camp at a place where there used to be some Italian gardens. Those cases were all remittent, without any of the symptoms of typhoid fever, and yet they were most persistent and intractable. They finally yielded to the quinine treatment, the quinine having to be given in solution and given in large doses every two or three hours. In regard to the cause of the disease, I think that water can be looked upon as only one vehicle for introduction, the same as sewer gas in enteric fever. People contract the disease who are by no means addicted to the habit of drinking water. However, I agree with Dr. Powell that the water is more liable to be contaminated than anything else. In those remittent and intermittent fevers the circulation, especially in the liver, is liable to be very sluggish, and we know that alkaloids when retained too long are destroyed, and you do not get the benefit of the quinine unless the circulation is kept going rapidly through the liver. If it is detained there too long you fail to get the effect. In the same way we know that unless there is an abundance of bile in the intestines to dissolve the quinine it will form an insoluble salt, which is only soluble in excess, and there again you will not get absorption. I therefore recommend that wherever you have a marked congestion of the liver a mercurial be given occasionally to relieve the congestion, and at the same time to produce a full and ready flow of bile into the intestines. If we find absorption of the quinine going along perfectly well there is no necessity for the mercurial. We should not make up our minds to always give mercury, or to always not give it, but to use a little common sense and see whether each individual patient demands the use of mercury or not.

Dr. G. W. Davis, of San Francisco: I am somewhat in harmony with both Dr. Kerr and the author of the paper. My opinion as to malarial fever some few years ago was that it was in part due to the contamination of the air, and also of the water. I remember a family living in the Sacramento valley, not far from Chico, who were in the habit of using cold tea, or tea generally, and they escaped more than their neighbors from malaria. I supposed at that time that the disease was largely due to the water which was being used in the low swampy place, and I was glad to hear Dr. Powell express the opinion that water often causes it, because if that be so we could more readily get rid of it and improve the sanitary condition of the communities where it prevailed. In regard to the treatment of chronic malarial trouble, mercurials are certainly indicated in the majority of cases, and quinine, but I also want to emphasize the use of arsenic in some of its forms. I think it is invaluable in those cases, and particularly where there is a great deal of anemia. I also want to emphasize what Dr. Kerr has said in regard to its prevalence in San Francisco. I think if there is any disease which you can diagnose to a certainty it is malarial fever and its complications. I do not believe in large doses of quinine. Formerly, while living in cities above the one where our worthy President resides, I gave very large doses of quinine, and it was a mistake. I believe in much smaller doses now, and more frequently repeated, than I did then, and I think we have less nervous manifestation that result from the large doses of quinine that have been formerly given.

Dr. R. G. Reynolds, of Upper Lake: I was very much pleased that Dr. Powell's condemnation of the use of mercury was not allowed to go unanswered, because I was in hopes that it would bring out the views of the Society fully, whether we could safely omit the use of mercury. I used to live in a malarial country myself, and I remember distinctly that I have time and again tried not to give mercury, but simply to break up the intermittent fever with quinine alone, and frequently I failed. I would give what I considered the specific amount of quinine, which would be sufficient to break the paroxysms, and yet they would return without the slightest interruption. I don't think I ever failed where I had preceded the quinine by giving sufficient mercury to arouse the liver, and then the quinine seemed to act invariably, positively, and break up the intermittent fever. I can hardly agree with Dr. Davis that small doses will accomplish the object in quinine. I am rather a stickler for small doses of many things, but I never could break up an intermittent fever in a robust adult with less than 20 grains of quinine given between intermissions, either in small doses very frequently until that amount was given, or else in one, two, or three doses.

DR. C. G. KUHLMAN, of San Francisco: There are two points that I want to dwell on—quinine and tea-drinking. General Gordon, of the British Army, in China, has furnished us some very valuable reports in regard not only to the condition of medicine and the various sciences in China, but also in regard to diseases there. According to his reports malaria is very prevalent in the valleys and along the river banks of the large rivers of China; which does not show that tea-drinking is a preventive, or that water is the principal carrier of the contagion. There is nothing to show that malaria is due to a specific micro-organism, or that it is an infectious disease within the meaning of that term, as all the symptoms refer to the nervous system, with perhaps functional disturbances of the liver and brain. As a rule malaria is contracted at night, when vapor ascends from the marshes, but it is not confined to marshes. Malaria may be contracted in any portion of the world, as Dr. Kerr says, no matter what the altitude may be. I think that malaria is due to carbonic acid poisoning. All the symptoms are those of carbonic acid poisoning in animals, as has been demonstrated by various chemical experiments, and the chemical analysis of the vapor that hangs over miasmatic or so-called malarial districts, is shown to contain a large percentage of carbonic acid, which we know is a deadly poison. I think that malaria is due to a direct poisoning of the histological elements of the organism by carbonic acid poison, whereby the physiological resistance of the histological elements are lowered. Now if this be true, which I believe it is, then we certainly are wrong in treating those diseases with alkaloids, because they are powerful depressors of nervous tissue, and we certainly are pursuing a wrong therapeutic method when we produce further depression. Our treatment should be that of stimulation, with special reference to the nervous structure.

EVENING SESSION.

Committee on Medical Jurisprudence.—The report of this Committee was read by the Chairman, G. F. SHIELS, of San Francisco, the subject being "A Few Remarks on the Status of the Medical Expert Witness" [published at page 263].

DR. W. E. TAYLOR, of San Francisco, in opening the discussion, said: I have listened with pleasure and I hope with profit to the paper which has just been read. I think the doctor is to be congratulated upon presenting this very important matter so fully and forcibly to the members of this Society, and through them to the medical profession of the State. There is no question that this matter is one of the greatest importance to every medical man. In some States the ideas which Dr. Shiels has developed are followed, but in a majority of the States the medical expert has no chance for remuneration. It does seem hard that a medical man who has devoted his lifetime perhaps to one particular subject should be called upon to give up his property, his personal property, acquired after years of study and expenditure of brain and money, for nothing. As far as I know no other profession or trade is required to do that, and I am fully in accord with the paper. Now as to medical experts: It is laughable and sometimes pitiable to see three or four medical gentlemen, all occupying a high position in the community, arrayed on opposite sides of a question. One gentleman gets up and gives his opinion. It is contradicted flatly and point blank by another of supposed equal ability. Therefore, those who are not posted are disposed to laugh at the medical expert, and the result is that men are often accused of being bought. How often do we hear that expression, that so and so was bought to go on the stand and prostitute his profession for dollars and cents. I do not believe that that is so in as many cases as we are led to believe. We all know that on any medical subject, no matter what, there is a great opportunity for a vast variety of opinion. Very often an opinion is wormed out of a physician by a suave attorney who has approached him before he really knows what the facts are; he goes on the stand and gives his opinion, and the man opposed to him gives a contrary opinion, and the result is that the testimony amounts to *nil.* The last proposition which the author has made is, I think, decidedly the better one for overcoming this difficulty. Some years ago I had quite a discussion with a famous judge, now long since dead, and his theory was that the Court should call the medical expert, who should in nowise be a partisan, and who should sit alongside the Judge on the bench in order to give him the proper information. I believe that that is the proper way and the only way. Some members of the legal profession have told me that this method would not do, because it places so much power in the hands of the Judge that he might be accused of partisanship. But I think it would be a good idea. I suggest that the President of this Society appoint a committee, of which Dr. Shiels should be a member, which would consult with other medical men and also with prominent lawyers, who I understand are willing to give their opinion, and draw up a statute to be submitted to the next Legislature, which will define the status of the medical expert. It should be made positive that he shall be compensated for his services, and it should also place in the hands of the Judge the power to summon one or more experts, and let the Judge, in the absence of any law, decide what their compensation should be. Medical expert testimony, even when given with the very best intent, is often stripped of its value by the trickery of the lawyer on the opposite side. I well remember when I was Coroner of this city holding an inquest upon the body of a woman who was supposed to have been killed by her husband. I am convinced now, as I was then, that the man was innocent and that the woman committed suicide. I had every reason to believe it. He was put on trial for his life. I think I was present at two or three trials—all of them, anyhow—because I believed the man was innocent, and I wanted to get a chance to give my opinion as an expert; that was what I was summoned there for. I was asked whether in my opinion that was a case of suicide or homicide, and the question was objected to by the prosecuting attorney. The Judge sustained the objection, and said it was a matter for the jury. I couldn't see what I was there for, and I have not found out yet; nor could I by any means get in my opinion as an expert in gunshot wounds that that was a suicidal wound, and although the man was on trial for murder, the intelligent jury rendered a verdict of guilty of manslaughter, and he is up in Folsom now serving out his sentence. It does seem to me that the statute should not only provide for the compensation of the medical expert, but should define his power as far as possible so that he will not be cut off; so that his opinion, if it has any value at all, shall not be taken away from him. We all come in contact with this thing every day. Some of our members have been imprisoned and others have been subjected to various indignities on account of this thing. I do hope that the matter will have a full and free discussion by members of the Society, for there is no other question before us to-day, outside of purely medical treatment, of any more importance than this one, and I hope that such legislation will be enacted as will take us out of this slough of despond.

DR. W. H. MAYS, of San Francisco: I am sure we all appreciate the able and vigorous paper of Dr. Shiels on this important subject. I think Dr. Shiels has struck the keynote in urging that this Society appoint a committee to draw up some statute governing this subject. The whole matter is at present in a very chaotic condition. I will not attempt to go through all the points of Dr. Shiels' paper, but I will simply say that in any expert work which I have done in this city I have always found the Judges very willing to afford proper compensation. The fault lies with the Board of Supervisors, who invariably cut down the bills from one-third to one-half. The deplorable spectacle mentioned by Dr. Shiels of one reputable physician going on the stand and giving his opinion under oath, and another going on the same stand giving an opinion diametrically opposite, is one that the whole profession ought to deplore. It is one that cannot fail to bring our profession into disrepute, and I think that is one reason why this matter is in its present unsettled condition. I think by far the better plan would be to allow the Judges to call the medical testimony, if it could be so arranged, and leave it entirely in their hands. I favor very strongly the proposition to have a committee appointed to take this matter under advisement.

DR. H. G. BRAINERD, of Los Angeles: It seems to me it would be better to have the Judge call the expert in civil as well as in criminal cases. An expert in a civil case is taken to the office of the lawyer, who goes over the case with him carefully and gives him a review of it, bringing out all the facts to support that. All the facts on the opposite side are smothered and kept in the dark, and that same fault would apply in civil cases as in criminal cases, more markedly perhaps in criminal cases, and it seems to me it would be wise to follow Dr. Shiels' suggestion in regard to civil suits as well as criminal suits, and allow the Court to call the expert in all those cases.

DR. W. WATT KERR, of San Francisco: The reason why you get conflicting answers from the medical experts lies simply in the fact that the attorney for one side forms a hypothetical question, generally with the assistance of his medical expert, who answers it for the benefit of that side, as he himself formulated the question. Then comes a hypothetical question formed by the opposite side, setting forth the views of that side, and naturally the expert for that side answers directly contrary to the expert put on by the other side. In this way we have a great deal of conflicting evidence. Sometime ago, I think by Dr. Washington Ayer, a similar proposition was made to that proposed by Dr. Shiels, whereby the Committee on Legislation was to endeavor to have a law passed so that all expert questions in Court would be referred to a jury of medical men. Unfortunately the matter fell through, because the meeting of the Legislature took place before the Society again convened. I think the better plan would be to again refer this to the Committee on Medical Legislation, of which we could retain the present chairman of the committee for another year or two, if the Society sees fit, and let the committee draft a bill which can be presented to this Society at its next meeting as a part of their report. It can then receive the endorsement of the Society, and it will be ready to present at the next meeting of the Legislature. I would therefore move that the suggestions of Dr. Shiels be now referred to the Executive Committee, so that they can refer it to the proper committee on legislation, so that it will not be lost sight of, as it was on the former occasion.

DR. J. R. LAINE, of Sacramento: If the Court calls in five expert witnesses you do not do away with the question of partisanship, and with the serious question as to how far their decision will go. The decision of the five medical experts must go to the jury for what it is worth; it cannot settle the question, as I understand it. Again, if you simply call up one or two and pay them it does not help the matter any; they may be biased nevertheless. I am in favor of one thing, and that is that medical expert witnesses shall be paid for their services and let their testimony go before the jury for what it is worth, as it must necessarily do. If you are to formulate the matter proposed into law it will be necessary first to introduce a resolution here and let us pass upon it now or at some future session of this Society. It would be better to do that than to refer the matter to a committee. The committee might not be in sympathy with the idea proposed by the writer of this paper, and if he or some one in sympathy with his ideas would introduce a resolution showing the scope of his intentions, we can then act upon it, and then it may be referred to some legislative committee in the future or enacted into law if possible.

DR. G. F. SHIELS, in replying, said: I do not want medical legislation. What I ask you to do is to appoint a committee who shall meet with lawyers and Judges who have signified their willingness—men like D. M. Delmas, Grove L. Johnson, Judge Hunt, Judge Slack, and others of that type—who are willing to assist in drawing up a statute to apply to expert witnesses. I don't want medical legislation; it is a farce and always will be a farce. I want a statute to apply to expert testimony generally, whether it is that of mining engineers, pastry cooks, machinists or medical men. Medical legislation is a farce, because it legislates for a small class. As regards the value of medical expert testimony, we all recognize the fact that it is to be dealt with by the jury, as other testimony. I pointed that out in my paper. If you have two medical men, each of equal standing, who give opposite opinions, of course it is perfectly competent for the jury to weigh their testimony and cast it all out or keep what they like. The jury has a right to deal with the most dogmatic medical statement and say it is not worth anything.

THE PRESIDENT: I would like to say a word upon this subject. We have a Society in Sacramento, the oldest in the State, and probably one of the most successful in this: that a larger majority of the practitioners of that place belong to the Society than any place in the United States. We practically have the whole profession in our Society. At a very early period this whole matter of the injustice and need of a change in our system of judicature was debated in that Society. We all felt the injustice of it to such a degree that we decided whenever called upon as experts to give our testimony, where we knew nothing of the facts, that we would refuse to answer. I happened to be the first man called in that relation. I went to jail constructively. The matter at that time was taken out of the hands of the lower Court, and it was decided by the Supreme Court—not the same Court that we have now—for that was at a period when there was a District Court in another relation to the lower Court; and the Judges decided in that Court that the doctor's relation to the community was such that he was obliged to answer as an expert; to give his time, to give his knowledge for the benefit of the State. After that our Society went to work and acted upon the Legislature, and if Dr. Shiels, or some of his legal friends had happened to have looked through the proceedings of that section of the State, they would have found out that a law was passed allowing Judges to say what compensation experts should have. That law was in existence for a few years—so long ago that I have quite forgotten the length of time, but it was the law, and some of us got reasonable fees as experts. When the Code Commission, with Creed Haymond at its head, took up our system, that was expunged, and from that time we were subjected to the old injustice. I am very much in favor of the doctor's plan; I hope it will succeed. I merely mention this matter as one of history.

Committee on Obstetrics and Puerperal Diseases.—The report of the committee [published at p. 266], was read by the Chairman, Wm. Fitch Cheney, of San Francisco, the subject being "Laceration of the Perineum and its Immediate Repair."

DR. G. W. DAVIS, of San Francisco: It occurred to me that Sims' position was rather an exaggerated one. Up to a few years ago I have always confined my cases upon the back. I think it was Dr. Goodell who called my attention to the importance of the left-side position, the old style, I believe, of confining patients. I then adopted that plan, especially in those cases where the vulva were rigid, and where there seemed to be great danger of laceration of the perineum. I found it worked admirably. But in cases where the integrity of the perineum did not seem to be endangered I did not particularly require them to occupy that position, for I found that women generally desire the recumbent position. So I say that the exaggerated position of Sims seems to me to be a wrong one. To get the exact position of Sims would, of course, necessitate the patient lying nearly upon her face, with the arm pulled out from under her, and the knees, particularly the right knee, well drawn up. The left-side position, and a pillow, or some support put in between the knees, is certainly, in my opinion, a better one. Dr. Cheney has emphasized the examination after confinement. I would recommend that you introduce the finger into the rectum and one into the vagina, and in that way you will be more apt to ascertain whether there is any laceration of the recto-vaginal septum. As to repair, I do not believe there is to-day any obstetrician who does not examine his cases carefully. I think, however, this is not by ocular demonstration. I agree with Dr. Cheney that they depend in many cases too much upon the sense of touch, which is of course a very important matter in those cases. The sense of touch we ought to educate, but some depend upon it too much, and I think it a wise plan to always examine the patient carefully with the vulva exposed. I do not believe there is a member of this Society who finds a laceration who does not repair it immediately, or within a few hours after confinement. The author says that in some cases he waits several hours after confinement before repairing any damage that has been done to the perineum. I think where it is possible it is always better to make that repair at once; to have the nurse remove the soiled clothing, and put a clean sheet under and use absorbent cotton, cleanse the parts, and make the repairs at once. He spoke about the parts being numb. They are certainly more so immediately after the birth of the child than they are several hours afterward, and I think that whenever possible the operation should be done at once.

DR. BEVERLY MACMONAGLE, of San Francisco: It is a fact known to all of us that laceration of the perineum will occur. How to prevent it I do not know. Whether one physician or another can do it; whether one obstetrician or another can do it, I do not know. It used to occur in my practice, but of late

I have not taken obstetrical cases, and I do not have any lacerations of the perineum to repair at once. If the laceration does occur and is not repaired, it is a fact that it must have been neglected by the man who attended at the time the laceration occurred. Now why laceration of the perineum should be left to heal by granulation any more than laceration of any other part of the body I cannot understand. Why laceration anywhere along the genital tract should be left to heal by granulation, as best it can, I cannot understand; therefore I think that any laceration, either of the vagina or of the perineum, should be repaired at once. In regard to the manner of repairing it, that is a matter of individual ability and experience with the instruments and conveniences that are at hand. As far as silk and catgut are concerned, I think they are materials that are not ideal for such operations, for the reasons that they continually absorb the fluids that are excreted from the uterus and from the vagina. Those discharges are well known to contain many bacteria that are poisonous to wounds, and they very often cause trouble. However, if there is nothing better at hand they can be used, and in the majority of instances a stitch at that time will heal without a doubt. As for discovering lacerations, it is a simple matter of examination. I do not think it is a good plan to put the finger in the rectum. I want to take issue with Dr. Cheney there. The rectum is a dirty place, and it makes a dirty finger; therefore you have to go immediately and wash your finger before you can get back to your operation. If the perineum is torn through into the rectum then we have got into a dirty mess and must make the best of it. If a good piece of cotton that is aseptic is passed well up into the vagina, and the discharge is prevented from coming down, the operation of stitching the perineum can be comparatively clean. If the operation of stitching the rectum has been done and is a success, the right thing has been done and the right result has been obtained. If the operation is a failure, the right thing has been done and the wrong result has been obtained. But the patient even yet is better off from having had that operation attempted, because she can still have the secondary operation done by the attendant when they are ready. I would be in favor of stitching all lacerations of the genital tract unless there is some especial reason. It does not take long, so I say it should be done at once, and if the man cannot do it himself he ought to have what assistants are necessary. I have myself stitched the cervix without any help, and got a very good result. It does not seem to be a very hard thing to do, if you can get hold of that cervix with a pair of forceps to bring it into position where you can stitch it. I have succeeded with catgut, and I have had miserable failures with catgut, for the reason that the bacteria from the vagina have been absorbed into the catgut and made it so poisonous that it poisoned the wound and gave a bad result; therefore I am in favor of silk and silver. Silk is better than catgut. The trouble of removing the stitches after the operation is very slight. I would not put my finger into the rectum. If you can leave a stitch that can be gotten hold of you can feel it, or with a long speculum along the anterior wall of the vagina you can easily detect the stitches and remove them one by one, or in any way you wish.

DR. HENRY GIBBONS, JR., of San Francisco: I simply rise to express my gratification in regard to the facts stated in the paper. I would take nothing from it and add nothing to it. It has been my practice for a number of years to resort to immediate repair of the perineum in these cases. I well remember, however, that when I commenced to practice it was a debatable question among the profession, the large majority of them opposing the immediate operation. I would like to emphasize the point made by Dr. Cheney in regard to the failure to discover lacerations by using the finger alone. I have been deceived many a time in that matter. I have thought that I had no laceration until I made an ocular examination, when I discovered that a laceration existed, sometimes to a considerable extent. A laceration, of course, down to the anus will be easily detected by the finger. A moderate laceration will scarcely be detected. One other point it seems to me is of considerable importance to emphasize, and that is in regard to the laceration made by the shoulder, or increased by the passage of the shoulder. I am convinced it very frequently takes place. I do not believe that a laceration often takes place solely by the shoulder, but a moderate laceration begun by the head will be increased greatly by the passage of the shoulder. I do not see the same objection that Dr. MacMonagle does to the introduction of the finger into the rectum for the purpose of a guide in taking the stitches. The finger need not be removed, and, in fact, I do not remove it while the stitches are being taken. The stitches are all taken with the finger in the rectum as a guide, after which the finger is removed and washed and the tying of the sutures is accomplished. It is difficult, perhaps, if the remaining partition between the rectum and the vagina is thin, to avoid passing the needle into the rectum without the guide of the finger, especially to a novice. Of course a man constantly operating in this way could very readily accomplish the operation without having his finger in the rectum as a guide.

DR. G. F. SHIELS, of San Francisco: It is difficult to understand why the mere stitching of a contused or lacerated wound, because it happens to be in the neighborhood of the vagina, should be mentioned as a special operation any more than would be the stitching of a wound caused by a blow. I don't see that there is any necessity of making a special operation of stitching the perineum. If it is stitched up it will heal all right.

DR. CHENEY, of San Francisco, in replying, said: I mentioned Sims' position intentionally. That is the position I have put the woman in. It is an exaggerated position on the side, with the left arm behind her, and the left limb drawn up, and the results are as has been stated. I cannot conceive what objections there can be to it. It is not my practice to wait several hours in every case before making repairs. It is the better practice to repair at once if you can. If there are objections offered, then wait. Dr. MacMonagle objects to the use of silk and catgut as suture material. I will admit that silk-worm gut is better suture material, but one must use what he can get, and if he does not have silk-worm gut at hand it is better to use what he has. The opinion of the doctor that silk and catgut are apt to absorb infectious material and cause bad results may be correct in theory, but it is not very often correct in practice. They are probably more frequently used than is the silk-worm gut, and the results in the majority of instances are good. If there is doubt about the question one should always carry his silk in absolute alcohol, or catgut as prepared by the several surgical houses. The objection to inserting the finger in the rectum has been answered by Dr. Gibbons. In regard to repair of the cervix I think the time is coming very shortly when the present views with regard to repair of the perineum will extend to the cervix. It was not included in my article, but a great deal is being written and said on the subject now, and probably in a few years attention will be called as forcibly to the immediate repair of the cervix as to that of the perineum. In regard to Dr. Shiels' suggestion, what he has said is exactly in line with what I meant to carry out, why a man in general practice who must sew up a lacerated wound here as elsewhere should think that perhaps a laceration of the perineum will heal by granulation or by the course of nature, is past my comprehension.

Committee on Gynecology.—The report of this committee was read by the Chairman, LUKE ROBINSON, of San Francisco, the subject being "Uterine Fibromata and Modes of Treatment." He said: Of all the lesions of the uterus none possessed more interest to the physician than the myomatous, or fibroid growths developing within its walls. The larger number of myomata develop in the wall of the uterus, their further progress depending upon their vascular supply and variation in mechanical obstruction to their progress as they travel in the direction of least resistance. It was interesting and instructive to compare the opinions of specialists on the treatment of these growths, In 1881 Matthews Duncan made the bold assertion that no one ever died from a fibroid. Three years before this Sir John Williams and Herbert Spencer, of London, had almost ceased to operate for the removal of interstitial, or sub-serous tumors. At this period, at the Samaritan (London) and most continental hospitals, all operable cases were consigned to the surgeon. Apostoli, Keith and others have certainly effected cures in a large number of cases by electrolysis. A still larger number of these growths have been checked and their symptoms abated by rest ergotin, and local treatment, under which he included the actual cautery. Taking up the surgical treatment, the speaker said there was a great diversity of opinion as to Battey's operation, although it was admitted that this premature induction of the menopause had in a large number of cases caused a cessation of the distressing symptoms. When an operation upon the tumor itself had been decided upon the first question was whether to attack it *per vaginam* or by abdominal section. The speaker then described at length the operation for the removal of interstitial fibromata adopted by Vulliet, of Geneva. This consisted in a preliminary splitting of the cervix by two lateral incisions, and a partial resection of the growth by means of long curved scissors. The uterus was packed, the dressing being changed frequently. At the end of a month the greater part of the tumor had entered the uterine cavity and was removed. In other cases reported by Vulliet in which the neoplasms were purely interstitial with bulging into the abdominal cavity, this treatment was followed by a complete cure. The speaker said he had some experience with this operation, one case in particular having been condemned to abdominal hysterectomy by the most prominent specialists in this country and in Europe. In this case a portion of a large tumor was removed with a serrated curette, and after four years the patient is in perfect health, and weighs 196 pounds. Enucleation *per vaginam* was not devoid of danger, nor was it possible where the tumor was situated in the upper zone of a uterus, fixed by adhesions. Regarding subserous myomata where the tumors are of moderate size, and in the absence of symptoms, surgical interference is unnecessary. If deemed advisable, however, enucleation after laparotomy should always be attempted in preference to hysterectomy. The speaker, in conclusion, reported a case illustrating the difficulties of making an accurate diagnosis even after an exploratory incision.

Dr. C. A. von Hoffman, of San Francisco, in opening the discussion, said: I am glad to be able to congratulate Dr. Robinson on the splendid success he had in his case of enucleation of a fibroid *per vaginam*. This method is not a new one; twenty years ago it was practised, and I had occasion to use several of these operations. The results were not as good, as asepsis was not understood as fully as we understand it now. This enucleation is always a difficult operation, and at the same time a dangerous one, as perforation of the uterine walls is not impossible. Only operators who are skilful and familiar with operating on the pelvic organs should undertake it. I am of the same opinion as the author, that in many cases, where the tumors are of moderate size, a necessity for surgical interference does not exist. Even those cases reported during the last year in which the myoma showed sarcomatous changes, are not so numerous that the mere presence of myoma should be an indication for operation, and I was glad to hear him say that in the majority of uterine myomata the strictly medical treatment is entitled to serious consideration. Tamponing and styptic applications to the mucous covering of the myoma will give satisfactory results in many cases. Electricity may be of benefit in controlling hemorrhage and pain, but Apostoli seems to be the only one who claims good results. A few years ago it was claimed and expected that electrical treatment would make operations for fibroids unnecessary, but even in France most physicians have given it up. Battey's operation of removal of the ovaries to induce the menopause and involution of the myoma is not performed very often any more, and the following case will show how uncertain the results are: Eighteen months ago Mrs. N—— came under observation. She was suffering from double pyosalpinx. After laparotomy both ovaries and tubes were removed. In the anterior wall of the uterus, a little above the internal os and protruding towards the bladder, a small, hard fibroid the size of a pigeon's egg was felt, but not removed, as I believe that after removal of the ovaries the small fibroid would not give rise to any symptoms. The rest of the uterus appeared normal. About five months after the operation the patient noticed a flow of blood from the uterus. At first regular, every four weeks, it became profuse, and then showed itself every three weeks, till the patient was obliged to stay in bed for several days at this period. The profuse flow could not be controlled by curetting, ergot, hot water: only tampons stopped it, and then only temporarily. In the mean time, the uterus grew larger to the size of a child's head, and the finger could feel, besides the original small, hard fibroid, several nodules, especially towards the right side. As the last remedy, I proposed removal of the fibroids, which operation was done five weeks ago with good results. This case shows that even after removal of the ovaries myoma may commence to grow. There are several methods of operation for removal of the myomata, and we have to select whichever is the best one in the given case. Especially the French physicians have worked hard during the last two years to find the best operation, and a very interesting article was published by R. Picherin, of the Hospital

Necker (*Monatschrift für Geburtsh ünd Gynecologie*). He says: A myoma growing from the cervix should be removed *per vaginam*. A myoma growing from the fundus with a pedicle should be removed after laparotomy. The pedicle may be treated intra-peritoneally, especially when the uterine cavity was not opened. Enucleation of interstitial myomata growing towards the cavity of the uterus is seldom done. Laparotomy and enucleation of interstitial myomata growing toward the peritoneal cavity is very conservative, but not liked very much. In supravaginal amputation of the uterus the cervix as a pedicle can be treated extra-peritoneally, and this method has given me such good results that I prefer to operate in this way till something better is found. The pedicle may be treated intra-peritoneally after Schröder's method, or it may be left unsutured, with the elastic suture remaining. Treub published 100 cases treated in this way with seven deaths. The next method is the extirpation of the whole uterus, and can be done from above. from the abdomen, or from below, *per vaginam*. Abdominal extirpation of the whole organ seems to be the method of the future, but so far the results are not very good. The published articles make this operation appear very easy, and I am afraid that the general practitioner, who in our time likes to make himself a name by performing laparotomy, will be disappointed with the results. This operatiou should be left to physicians who are familiar with abdominal operations till the *technique* is a perfect one. The same applies to the operation of vaginal extirpation of a myomatous uterus. From the description of these operations as done by Péan, Ségoud and Doyen, they appear easy and bloodless. But an enormous amount of labor is required (from one to two hours) to remove *per vaginam* a large myoma reaching to the umbilicus. Picherin gives as the result: Vaginal hysterectomy is the best method to remove myoma, but when the myoma is very large the French operators prefer the abdominal or abdomino-vaginal hysterectomy. The *technique* of this operation is not yet perfect, but all work to improve it till the mortality will be as low as in other abdominal operations. Another indication for vaginal hysterectomy was mentioned by Dr. Robinson. It is inflammation of the appendages, with formation of abscesses. In 1886 Péan removed the uterus from a patient who had been operated upon by him four years previously. The first operation for inflamed appendages was unsuccessful in relieving pain. The hysterectomy was brilliant in its results. Since then he found that even in those cases in which the uterus was removed and the appendages abandoned a cure resulted. I do not believe that this operation can replace the removal of the appendages by celiotomy. In certain cases the operation will be indicated; in other cases celiotomy will be better, but, so far, distinct rules cannot be laid down. Personally, I have no experience. I would try the operation in a case of neglected pelvic abscess of long standing, but am aware that the operation will be a difficult one.

Rest as a Therapeutic Means in Gynecology.—CHARLOTTE BLAKE BROWN, of San Francisco, in a paper upon this subject, said: The specialty of gynecology, during the past ten years, had in its treatment tended to become largely surgical. The removal of the ovaries, or a vaginal hysterectomy, had become so frequent that patients and their friends discussed it as a panacea for all woes. Dilating and curetting appeal to the gynecologist as imperative measures in cases of stricture, with accompanying dysmenorrhea and endometritis. Prolonged observation, however, showed that only about one-half the cases so treated are really cured without careful and prolonged after-treatment. So, too, the much abused operations on the cervix and those for uterine fixation do not, in more than 60 per cent. of the cases, cure the patient and enable her to do without a doctor. Too often she is in the condition of the woman in the scriptures "who suffered many things of many physicians, and grew nothing better but rather worse." The factors which cause women to be invalids with special diseases are well known. The speaker then indicated them briefly by describing a supposititious case. A healthy girl of 20 marries, becomes pregnant, and is delivered in the first year. She sustains a bad laceration of the cervix and perineum, neither of them repaired at the time. She does not nurse her child, but makes a fair recovery, and calls herself well. The second baby comes a year later. Number three is born before the first child is three years of age, still the patient seems well and has nursed these later children in part or entirely. Under pressure of increasing trials and greater expenses, with perhaps mental worry, this woman breaks down, becomes a physical wreck, her troubles are pronounced gynecological, and surgery advised as the only remedy. This picture was not overdrawn, and every specialist must recognize that operations too often do not cure. In 1875 Weir Mitchell wrote a paper on "Rest in the Treatment of Nervous Diseases of Women." Since then many women have been restored to health and usefulness through its means alone, and its application has been extended to many other diseases. A little well-applied local treatment, or plastic surgery, may be necessary in some of these cases, but these should be minor means, an adjunct to the main treatment. Dysmenorrhea, menorrhagia, or amenorrhea, occurring in school girls from 14 to 16 years of age, will generally be cured by rest and change of occupation. The same treatment is beneficial for the "society girl," who breaks down after a few years' dissipation. Even if local troubles be found, local treatment is not a necessity, and will not cure the case. Taking up the major operations of gynecology, the speaker said that great wrongs had been done to women during the past 20 years, for cures were not the uniform rule. Emmet had always been firmly opposed to these operations except in extreme cases. Goodell said "the number of cases which seem to me to justify such operations grow less every year." Surgery teaches that pus must always be evacuated, and celiotomy for pyosalpinx has been the one operation that seemed absolutely indicated. The speaker then related a case in which a patient with double pyosalpinx had declined operation, and who, after careful treatment, had recovered, and remains well after the lapse of 7 years. Another case, that of a woman 42 years of age was mentioned, in which öophorectomy for degeneration of the ovaries seemed imperative, yet the improvement following prolonged rest was so marked that the operation was abandoned. Three years later she was married, and at 47 years was safely delivered of a child, and is now a healthy woman.

DR. T. W. HUNTINGTON, of Sacramento: Though the hour is late and the members of the Society present are weary, I feel that this paper ought not to pass into oblivion—for that is where it will undoubtedly go—without some little comment. I regard the paper as one of especial excellence, and it is to me particularly cheering to hear from the lips of a person who is so closely in touch with her *clientéle*, and who has so carefully analyzed situations as has the author, that we can do something other than resort to the knife. After a considerable experience by the ordinary methods of treatment of this class of cases, with an occasional resort to laparotomy and other operative measures, I have learned that no matter how skilful the operator may be, no matter how conscientious he may be in the selection of his methods and his means, that the humiliation of defeat will now and then upset his calculations and render him at least doubtful as to the propriety of very many of the procedures which are so often resorted to in these modern times.

A Plea for the External Treatment of the Pedicle in Hysterectomy for Uterine Fibroids.—W. H. MAYS, of San Francisco, read a paper upon this subject. He said in removing a fibroid uterus there were practically two courses open: (1) To extirpate the mass, including the cervix, or leaving its infra-vaginal portion. (2) To make a pedicle of the cervix and clamp it in the abdominal wound. The latter or extra-peritoneal method should be preferred in almost all cases. Total extirpation leaving a neat line of sutures across the pelvic roof might be considered the ideal operation, but as Marcy has observed the ideal operation is that which attains the object and saves most lives. Good authorities supported each method, amongst those favoring the extra-peritoneal being Bantock, Péan, Keith, Tait, and Price. The speaker said, without attempting a full description of this operation, there were some points upon which he wished to dwell. The incision should be higher on the abdomen than in an ordinary laparotomy in order to avoid the bladder. The upper part of this incision may be temporarily drawn together after delivery of the tumor. A large globular tumor is sometimes so firmly impacted in the posterior *cul-de-sac* that it is very difficult to eventrate it. For this purpose Martin, of Chicago, had recommended the application of the short obstetric forceps, which was a most useful and practical suggestion. After, sometimes before, delivering the tumor, tie off the broad ligaments, leaving the ovaries attached to the mass. Then place a row of hemostats on the peritoneum in front of the uterus, and a similar one behind. Next divide the capsule down to the uterine parenchyma, and strip it down in front and behind. This gives the pedicle. The transfixion pins are then pushed through, the Koeberle applied, and the tumor cut off an inch above the pins. The parietal peritoneum and the peritoneum of the pedicle are then stitched together, the hemostats allowing the two layers to be handled without difficulty. The stump usually comes away in 7 to 14 days. With proper management there should be no suppuration. It might be thought that the resulting cicatrix would be unsightly, yet in the lapse of time there is usually little to indicate the former presence of the pedicle. Ventral hernia is not more liable to follow nor need vesical complications be feared. There was no such thing as "drag on the pedicle" to be reckoned with. It might be supposed that there would be great difficulty in bringing up a short, thick stump, and in obtaining a pedicle in cases where the cervix was included in the tumor, but practical experience had demonstrated that neither of these difficulties were often encountered. The speaker formulated his conclusions as follows: (1) It is safer. (2) It is easier and quicker, requiring one-third less time. (3) There is less shock, and the greater part of the operation is done outside the peritoneal cavity. (4) Complete hemostasis is assured. (5) The risk of wounding the ureters and bladder is minimized. (6) The danger of sepsis is less.

SECOND DAY—TUESDAY, APRIL 17—MORNING SESSION.

Medical Men and Medicine Men.—E. J. OVEREND, of San Francisco, read a paper on this subject. He said: In view of the fact that there is a certain lack of respect and sympathy for medical men on the part of the public in general, it might not be wholly improper to inquire into the causes of this state of affairs. The doctor who was susceptible of and exposed to suits for malpractice figures largely in such suits, the public sympathy commonly going with the plaintiff. On being subpened as an expert witness, he is commonly looked upon as fair game to be worried by glib attorneys, while the newspaper paragrapher and humorist finds a perennial outlet for his wit in lampooning the profession. There must be a cause or causes for such a state of affairs, and in the relationship existing between the physician and the patient, it would seem that we can well discern part of the unwarranted assumption in the former and some of the foolish credulity in the latter that existed in former ages. The speaker asked to what extent is a medical man of to-day "a medicine man," and how much of his reputation among the credulous portion of the laity depends upon deceit and the assumption of a power that he has not. It is a decided assumption when he takes no pains to dispel belief in his supposed omniscience and omnipotence. The difficulty and sometimes impossibility of accurate diagnosis in the prodromal or incubative stages of disease, as well as the difficulty or impossibility of accurate prognosis, has led the profession to cultivate the art of stuffing the patients with stereotyped formulæ and oracular phrases full of import to the ear, but meaningless to the mind. If he be truthful and state the limitations of science, declining to go further, he must fear a loss in the confidence of his patients, in his practice and in his fees. This practice of tergiversation is odious—it is the duty of science and of medical men everywhere to combine against such petty arts. There is a way of educating the public to a decent understanding of the limitations of medical science. It consists in telling patients what we do not know as well as what we know. They should be taught that medicine is made up of a number of sciences, more or less exact, the less exact of which is therapeutics, the very one by which they judge the whole. When that time arrives the patient will be satisfied with the scientific regimen laid down by the physician, and not look for a "bottle of bitterness" as an indispensable adjunct. Drug mania has at present full sway in the profession, constituting another reason why the average doctor is in some danger of being called a "medicine man." The surgeons, as a rule, in avoiding Scylla, are drawn into Charybdis, they are open to the objection that they are afflicted with *puritus secandi*. The profession needs a robust scepticism for its protection, not only from manufacturing pharmacists, but even from prominent members, who advocate with persuasive pens novel but worthless methods.

Committee on Medical Topography, Meteorology, Endemics, and Epidemics. The report of this committee was read by the Chairman, J. H. DAVISSON, of Los Angeles, his subject being "Altitude in California in Relation to Immunity from Tuberculosis." He said: In looking for a climate immune from consumption, if such can be found, an impression prevails that the conditions obtain only at high altitudes. Many climatologists, both native and foreign, send their patients to altitudes of 3,000 to 7,000 feet, regardless of the stage of the disease or associated conditions. Even Theo. Williams, of London, says hemoptysis is not a contraindication to mountain treatment, a statement with which the speaker's experience and observation were at variance. It has been urged that high altitudes increase the number of red blood corpuscles in tubercular patients, but this desirable result rather depends upon improved general health, and is not alone characteristic of high altitudes. As yet we have no complete statistics on the influence of altitude and climate upon tubercular diseases in California. Even if we could have data as to recoveries as we now have of deaths, climatic effects would appear to a disadvantage, because most tubercular patients have come to the Pacific coast as a *dernier resort*, in the third and last stage of the disease. Tuberculosis was almost unknown amongst the Indians in California, and also amongst the native Spaniards and Mexicans. If physicians would advise their patients to go to California while the disease is incipient, and if such patients would remain, they would be rewarded in good results. Some would-be climatologists have written of the prevalence of consumption, and the high mortality of the disease in California, as if such a condition of affairs did not obtain at every famous health resort on the face of the globe. The reason for this high mortality had already been explained, and it had nothing to do with the climate or environment of the individual. The lower altitudes of California are beneficial in all forms of innutrition, including tuberculosis, and are not enervating or exciting to the nervous system as the higher altitudes of New Mexico, Colorado, and Switzerland. These climatic effects are in contrast with the Riviera, and, although in many respects similar, yet the marine climate of the lower levels of California is devoid of the chill and exciting qualities of the latter due to the mistral, so objectionable to nervous and delicate patients. Joccoud, writing of Gürbersdorf, in Silesia, says, in spite of its low elevation (1,827 feet), its tonic action is in every respect similar to the conditions prevailing in Switzerland at four times that height. The earlier climatologists advocated high altitudes in the treatment of phthisis in all stages and conditions, but the investigations of Tyndall opened up a new field of thought by demonstrating the fact that the cause of the salutary effect of high altitudes was largely due to the absence or paucity of bacteria in mountainous districts. Further investigations on the same lines have demonstrated the absence of germ life in mid ocean, on islands, and in marine climates generally. Dr. Geo. M. Kober, U. S. A., shows that elevation affording immunity to consumption differs in different zones. He concludes that immunity is not alone due to altitude, as was formerly believed, but depends in great part on the absence of bacteria at these altitudes and in marine climates. In support of this, he mentions that the death rate from consumption in the British Army is 10.7 per thousand as against 1.76 in the navy. High altitudes are contraindicated in nervous patients, the aged, in cardiac disease, advanced tuberculosis, laryngeal tuberculosis, in febrile, and in hemorrhagic cases, all of which do well in the marine climate of California at low altitudes. A careful survey of California will show an endless variety providing a suitable habitat for almost every diseased condition or idiosyncrasy. In altitude one can go from sea-level to any required height conducive to health, or from sea-level to 350 feet below in an aseptic, almost rainless atmosphere, including all the essential meteorological conditions so much sought after in high altitudes without their exciting qualities. The marine climate of California, including the islands near the coast, present a variety of conditions with less humidity, and are, therefore, less oppressive than similar climates elsewhere.

Dr. R. F. Rooney, of Auburn, in opening the discussion said: The laws of climatology and climate therapy have been pretty well studied within the past quarter of a century. The fact that mountain air is better than the air of the lower levels has been very well demonstrated, and has been almost universally accepted by the profession. I see that the author rather claims that the air of the lower levels is equally as good as that of higher parts, but the percentage of mountaineers affected by disease is certainly very much less than amongst those living at lower levels. This is probably due to the atmospheric pressure, although other factors also exert a marked influence. Atmospheric pressure is greatest between the latitudes of 30° and 40° north or south. This is probably due to the overlapping of the equatorial and Polar currents. It is exactly in these latitudes that we find the largest percentage of cases of phthisis. Whether it is due to this greater pressure or not is somewhat undetermined. The pressure at sea level is about one and one-half times as dense as at 10,000 feet above. Another great factor in altitude is the electrical force. Of course the electrical conditions of the air are positive, and those in the earth are negative. In the higher levels of the atmosphere the electrical force is very much greater, and for this reason it is supposed that it exerts a more important influence upon phthisical patients than at lower levels where the electrical force is less. Again, there is a very much greater amount of allotropic oxygen in mountain air, but there is a great variation in its amounts in different localities having the same altitude. A full exposure to the light and heat of the sun increases this element, and hence locality must be studied, no matter where we go. The soil of the mountains is generally loose and sandy, which is also a very great advantage over that of the valleys, which is mostly clay and heavy loam soil. There is a minimum of clouds in the mountains and no fogs, so that the rays of the sun are not intercepted except in stormy weather. In the mountains there is less decomposing vegetable matter. Dr. Davisson claims that this is not the case, but it can be readily proved that in the Hawaiian Islands, where the atmosphere ought to be almost pure, as they are surrounded by vast wastes of water, the conditions are especially unfavorable for consumptives, although it is not known generally to medical men that it is so. Medical men all over the United States are yet sending their patients to Honolulu and other parts of the Hawaiian Islands with the expectation of their receiving benefit from the pure atmosphere in cases of consumption, and the physicians in those islands ask us, "For God's sake, why do you send your phthisical patients to us? they die here invariably." In the mountains there is the additional aid to phthisical patients of the antiseptic resinous emanations of the coniferæ, which cut a very large figure. Emanations from human lungs are particularly obnoxious. Nearly every man is particular about his drinking water, but pays no attention to the air he breathes. What would we think of a man who would drink water with which a diphtheritic patient had just gargled his throat; and yet, in fact, it is no worse than to breathe the air that the consumptive has just thrown out of his lungs. The number of cases of phthisis that have originated among the native-born of the town of Auburn, with about 2,500 inhabitants, lying at an altitude of 1,300 feet in the Sierras, during the last fifteen years was five. Out of those five, three were persons engaged in the official service of the county, and who worked in a building, in the basement of which is the County Jail. This often contains twenty or thirty unwashed and diseased prisoners, and the whole building reeks with their emanations. The Court-house is an old-fashioned, brick building, erected in 1850 or 1851, and sanitary precautions were not taken in those days, so that it is a very unhealthy building, and it is no wonder that these three young men fell victims. Of the other two cases, one, a young lady, 18 years of age, was not born of phthisical parents. She came in contact with the disease while helping to nurse her brother-in-law, one of the young men who contracted the disease in this old building. But people will go on living in just such an atmosphere as unconcernedly as though they had never heard of consumption. Even in the best localities in the mountains I consider it is dangerous to the well to crowd the sick into hotels and sanitariums. There is no such disgusting creature upon the face of the earth as the poor consumptive. When he expectorates he always investigates it to see if there is any blood in the sputum; he coughs up a large mouthful and he ejects it into his handkerchief, which he then opens out for investigation. If he be upon a porch or in a hall he spits upon the floor so as to get a good view of it, and then draws his foot over it to obliterate it. He spreads it out to dry, and the broom of the chambermaid following after him, or the trailing dress of passing ladies, bring it up into the air for us to breathe. Even in death the consumptive is dangerous. The germs live for years, as has been proved by recent investigations, and are brought to the surface of cemeteries and carried off by the winter rains to contaminate our water supply. Medical men, generally, appreciate the doctrine of the contagiousness of consumption, although I understand that some medical men still deny this. Physicians should make cremation their shibboleth until it becomes a universal custom. I believe that in cremation lies one of the great powers that we have of obliterating, or rather ameliorating the effects of this disease.

DR. C. G. KUHLMAN, of San Francisco: A good many statements have been made to-day that are not borne out by scientific investigations. We have absolutely no knowledge as to the origin of tuberculosis; it is all conjecture. There is no literature, either ancient or modern, that gives any light whatsoever as to its origin. We know it affects all races alike. It is found in every clime. Recent investigations in Greenland showed tuberculosis extensively disseminated there, showing that it must have existed for centuries in a climate most unfavorable to the origin and propagation of so-called germs. The same fact is true of Finland, Sweden and Norway, which, as you know, have a rocky coast. It also prevails extensively among the colored races, and is a common disease among negroes. I cannot accept the theory primarily that germs either cause or influence the course or duration of this disease.

DR. J. H. STALLARD, of San Francisco: I have always understood that altitude had a very great influence upon the prevalence of phthisis, and that there are altitudes in the Andes where the disease is unknown. Certainly it is less prevalent in certain characters of atmosphere—that which is high and dry. The conditions for the propagation of phthisis are tolerably well-known, and no disease with which we have to deal is more amenable to the sanitary conditions and surroundings of the people. I have already spoken several times upon this subject before this Society. I remember the time in my native town when between 400 and 500 people in every 100,000 of the population died annually from phthisis. Enormous expenditures took place for sanitary and other improvements and the organization of a sanitary authority. Great improvements took place, and after the expenditure of some £30,000 in sewers alone, the mortality from phthisis went down to something like 317 in each 100,000 of population. Wonderful improvements have gone on, and the condition of the people has changed, and I believe the mortality from phthisis is now reduced to something like 200 per 100,000. I think by directing our attention to the general principles of sanitation and of good food and clothing, and improvement in the condition of the houses, the ventilation of our rooms, the organization of our factories and the regulation of the hours of labor, we can exert a more direct influence upon the prevalence of consumption than either mountain air or climate of any description that I know of.

DR. DAVISSON, of Los Angeles: Probably the fatality of tuberculosis in the Hawaiian Islands, as in California, is due to the fact that patients go there in the third stage. It is so far away from the populous centers that we rarely see patients in the incipient stages of the disease, and those in the third stage die wherever they go. The point that I wished to make was this: Not that I advocated the sea level or below sea level as the ideal place for tubercular patients, but I desired to contrast the effect of the lower levels with the higher altitudes, and if I did not make it plain, I desire to say that my own experience in altitude is that there are other conditions that cut a figure. It is not the mere elevation below or above sea level. My best results have been attained at altitudes of about 2,000 feet. This is also true in regard to the late Dr. Loomis' results. He has attained the best results on an average at about 1,800 to 2,000 feet. When I spoke of the lower levels in California I did not intend to convey the idea that I meant necessarily at sea level or below it, but altitudes and places such as Dr. Rooney has mentioned, and localities above that, as contrasted with altitudes of say 5,000 or 6,000, or even 7,000 feet.

The Medical Topography of Northern California.—B. M. GILL, of Dunsmuir, read this paper, which he said would deal especially with the scientific and practical adaptability of Northern California as a health resort, and as a place of residence. Now that the germ theory has obtained a fixed footing, the question presenting itself to the thoughtful man is, Where can I reside that the conditions so far as germ-infection is possible may be minimized? The mountain regions of our State sloping largely to the westward present a very desirable place of residence for Eastern people, for various reasons. There were a greater number of sunny days during the year, constant supplies of pure water, a drier atmosphere, while the large forests gave a better mean temperature throughout the year by equalizing the evaporation of moisture. The steep and rugged surface of this country precludes the possibility of swampy land. Fogs and mists are rare, and the average humidity is far less than on the coast, or in many of the Eastern States. In this climate the various throat troubles, not malignant nor of an advanced tuberculous nature, are benefited and often permanently cured. Catarrhal bronchitis makes rapid improvement; phthisis will often be retarded or apparently cured. There are no cases of asthma on record as originating in the mountain regions of Northern California, while all who are suffering from true and uncomplicated asthma are benefited. Nervous diseases are greatly improved in this climate, and patients suffering from overwork and nerve-strain rapidly recover lost vitality and wasted strength. Summing it up, the dry, even temperature of the northern Sierras, especially in the vicinity of Mount Shasta, are, even in the winter time, very beneficial to many classes of invalids, and to people of low vitality.

DR. C. G. KUHLMAN, of San Francisco: The only point I object to is the germs. There are a good many valuable points about the paper in regard to the filtration of water, etc. Still, I do not agree with the author. I think a certain amount of organic matter is absolutely necessary to carry on the process of life. A certain amount of water capable of producing decomposition is necessary for digestion, and I do not think that any human being would thrive very well on distilled water, but rather would die rapidly. Nor would they thrive very well without certain salts in solution—the chlorides of the earthy metals.

DR. J. H. STALLARD, of San Francisco: I agree with Dr. Kuhlman, very largely, that distilled water is not usually necessary for healthy people. I doubt whether water is necessary at all in its present form.

DR. R. F. ROONEY, of Auburn: How pleasant and agreeable it is to live in California! I don't care where you go in this State we find a favorable climate, and one which we can all appreciate, and which we are not ashamed of in any part of the world. I don't care what country they bring to bear against us, we can stand them off, and we ought to be proud of our whole State.

Committee on State Medicine, Hygiene and Adulteration of Foods and Drugs. —The report of this committee [published at page 258] was read by the Chairman, W. R. CLUNESS, of San Francisco, the subject being "Progress in State Medicine."

DR. T. W. HUNTINGTON, of Sacramento: The selection of the chairman of this committee was a most fortunate one. I presume there are few men in the State who have given so much time and attention and hard work to sanitary matters as Dr. Cluness. I hope that the recommendations he has made will receive due and respectful attention on the part of the Society.

DR. J. H. STALLARD, of San Francisco: I am delighted to hear of the enormous decrease of phthisis in Europe. It is the most remarkable gain in human life in England with the exception of the diminution of the deaths from typhoid fever during the last forty years. In every part of England the diminution of deaths from consumption has been really marvelous, amounting to over 50 per cent. It was my fortune to be a member of the Asylums Board in London, and I took an active part in the building of asylums. I hold that it is most important that there should be a complete separation between the chronic and the acute insane; of that there should be no doubt whatever. There should be no chronic insane patients kept for a longer period than a certain definite time, may be six months or a year. Of the chronic insane a large proportion must be kept in asylums specially built for them. They do not require the same amount of classification, medical care and nursing, and they may be put altogether upon a different footing from the acute cases. I am also of the opinion that a very large number of the chronic cases might be properly located with individuals outside. Those patients who are able to do a little work might be located with farmers, who would treat them kindly and far better than the officers of the asylum could, and their labor could be utilized for the benefit of the community. I do hold that we cannot, generally speaking, treat humanity by wholesale, and the more we distribute and separate this particular class the better it will be, not only for the class, but for the community. They may not have as fine clothes and as perfect beds to lie upon as they would have in a State asylum, but, on the whole, they would be freer, happier and more comfortable.

There is a great deal of force in the suggestion to put the asylums under one management, but I think there ought to be an inspection over and above the management—a well-educated, independent authority, fully acquainted with the habits and treatment of the insane. I know no better or economical management of the insane than is had in Scotland, where the insane are placed, to a large extent, with farmers. I think there is a great field for improvement in the management of the insane in this State. I agree with Dr. Cluness that the public get what they deserve; but what is the remedy? It is not to increase the powers of the State Board of Health, or anything of that sort. You cannot impose upon an ignorant populace more than they deserve, and, therefore, you have to educate the people and teach them the true value of sanitation. Commissions composed of men with large private practices should not be appointed, but we should instruct the people through men of their own selection. This city will never get a good sewer system until the people are convinced of its necessity. No Commission, or Board or Works, or Mayor that you can elect, and no person individually, can ever be found to impose upon the citizens of San Francisco an expenditure which may amount to millions without their knowledge of what should be done.

Supplemental Report on State Medicine.—M. M. CHIPMAN, of San Jose, read a paper as a supplemental report on State medicine. It dealt largely with the opium habit and the extent of its ravages amongst the Caucasian race.

AFTERNOON SESSION.

The Status Presens of Inherited Tuberculosis.—C. G. KUHLMAN, of San Francisco, read a long and exhaustive paper upon this subject. He said no bacteriological condition had received so much attention from scientific men as tuberculosis. This was owing to its universal distribution amongst the races of mankind, and many of the animals furnishing food, as well as to the fact that efforts to cure or to retard the progress of the disease had hitherto been of little avail. The United States census of 1890 contains statistics relating to tuberculosis, which, while not very accurate, served as a text for many papers that have been read before national and local medical and sanitary societies. These have for their object the State and national control of all persons and families affected with tuberculosis. The speaker said he had carefully read all the papers published in this country up to date, and he felt justified in saying that in no instance had the arguments advanced in support of the general assertion that tuberculosis was a contagious affection and dangerous to public health been based upon reliable and scientific data. His paper would therefore present in a compact form, and, he believed, for the first time in the medical history of the country, "all the world's scientific data" upon this subject. He then entered at length into the history of the disease, its etiology and pathology, quoting numerous authorities under every head. He concluded by saying that while there existed no reliable scientific data that would justify us in assuming that so-called infectious diseases are caused by specific microörganisms, still it could not be gainsaid that human beings and the lower animals were affected with various microbic organic parasites capable of accommodating themselves to the various changes occurring during life and death. These changes were summed up, showing that the origin of the parasitic forms was shrouded in as much mystery as the primary origin of the forms they infected.

Committee on Publication.—A. P. WOODWARD, of San Francisco, the Chairman of the committee, read this report. He said: The transactions of the Twenty-fourth Annual Session were issued from the printers under our supervision after some aggravating delay to the committee, and perhaps to the members of the Society. It seems impossible to have everybody on time—if one department is dilatory one year it probably reforms, and another official or member becomes the means of the tardy issue. Five hundred copies were printed. The cost this year was somewhat increased by the publication of some extended experiments made upon rabbits with electricity. The committee thought this justifiable from a scientific standpoint. On account of economy a messenger was employed to deliver copies to all members in San Francisco. Copies were mailed at a cost of 15 cents each to all members outside of San Francisco, and complimentary copies were sent to various medical journals, libraries, and to the Secretaries of State medical societies as per list published on last two pages of the twenty-fourth volume. [The financial portion of this report was referred to the Executive Committee.]

Deposits in the Colon.—A. E. BALDWIN, of San Mateo, read a paper on this subject. He said physicians were sometimes called to cases suffering from acute pain in various organs. This was reflex in character, and careful examination of the different organs would fail to reveal the cause. Although the functions of the stomach and intestine seemed normal, it could generally be ascertained on close inquiry that the large intestine was the source of the trouble. The speaker then enumerated a number of symptoms, amongst which were: pain in some sympathetic nerve center, heavy weight in the abdomen, and sensation as if some of the internal organs were loosening from their natural attachments, feeling of weight in the head, sleeplessness. All or only one of these symptoms might be present in a given case, but careful examination over the colon by percussion would generally find the area of dulness indicating the accumulation. Usually the first prominent symptom to attract attention was a diarrhea, at first intermittent in character, but later more persistent, and finally accompanied with mucus and blood. In many cases the first effort at treatment was to check this, and so add to the trouble. He believed that to its cathartic action the advantages of calomel administered early in typhoid fever were to be attributed, as this condition of accumulations in the colon predisposed to enteric fever. He said when the discharges are old and foul and there is mucus or blood present; when there is a brick dust deposit that settles to the bottom of the closet, or when the discharges flow, he would give the following: Small doses of sodium carbonate and magnesium sulphate well diluted every hour until the bowels unload, then wash out the colon with a 10 per cent. solution of glycerine, nourishing the patient carefully until the strength improves. The speaker then reported at length a number of cases successfully treated in the manner indicated. Relief was usually prompt, and while many of them were of long standing they had all been cured.

Committee on Diseases of the Mind and Nervous System.—The report of this committee was read by the Chairman, H. G. BRAINERD, of Los Angeles, the subject being "Peripheral Neuritis." He said· A score of years ago, inflammation of the peripheral nerves except from actual trauma was believed to be a very rare disease. More recent investigation, however, has shown that it is a very common pathological condition. The inflammation may involve the perineurium and interstitial connective tissue, perineuritis; it may be limited to the nerve fibers themselves, parenchymatous neuritis; or it may be the diffuse type, involving both the connective tissue and the nerve fibers. In perineuritis the degree of inflammation usually produces so much pressure as to cause more or less destruction of the nerve fibers themselves. Hence the clinical symptoms in either form are substantially the same. The naked eye appearance differs somewhat in neuritis. In perineuritis there is often sufficient increase of connective tissue to be quite apparent so that the nerve may be felt as a hard cord when it lies in exposed positions. As a result of this increase of the connective tissue complete recovery from sensory disturbance is rare, but the recovery of motive power may be quite rapid. If the inflammation has been severe enough to destroy the axis cylinders of the nerve the process of degeneration of the nerve fiber is usually complete in two or three weeks, and in favorable cases is followed by regeneration, which may require a period of two years, and often is never complete. In the parenchymatous form there is very little change in the naked eye appearance of the nerve. The pathological change in perineuritis is an infiltration of white corpuscles, and sometimes of blood corpuscles, in the perineurium and endoneurium, which breaks up the myelin of the nerve fiber, and sometimes destroys the axis cylinder of the fiber itself. In parenchymatous neuritis the connective tissue is unaffected, but degeneration of the Wallerian type takes place in the nerve fiber. In the diffuse type both of these conditions exist. The inflammation is not usually equally severe throughout the length of the nerve, but is distributed in patches, usually being most severe where the nerve emerges from a bony canal or passes through fasciæ. The symptoms of neuritis are usually a numbness, tingling and pain of a burning, boring, radiating character, beginning in the most distant portion supplied by the affected nerve; and though these sensory disturbances may extend to the whole area supplied by the affected nerve, they continue most marked in the distal portions. Depending upon the intensity of the inflammation there will be loss of motive power, varying from slight paresis to complete paralysis; diminution or loss of the reflexes, and the muscle loses its faradic irritability, while its galvanic irritability is increased. Instead of the typical reaction of degeneration there is sometimes loss of reaction to both the faradic and galvanic currents; or again there is an early increase of irritability to both these currents, with, later, diminished faradic and little or no increase in galvanic irritability. In cases where the inflammatory process is severe enough to produce marked loss of motor power the typical reaction of degeneration is quite uniformly found within ten days of the onset. Besides the tingling, numbness and pain. which is increased by pressure over the nerve trunks or by motion, there is great diminution of the perception of tactile, muscular, temperature, and painful sensations. The tactile and muscular senses are often completely lost, but the appreciation of temperature and painful sensations is rarely wholly abolished. The most common trophic change is rapid atrophy affecting the muscles, often accompanied by coldness and edema of the affected limb, together with either a shiny or rough appearance of the skin. Sometimes trophic changes occur in a joint, resulting in deformity and fixation. The speaker then briefly reviewed the literature of the subject and entered more fully into the etiology and pathology of the disease. He next reported several cases illustrating the various types of the disease. Regarding prognosis, in perineuritis the prospect of restoring the usefulness of the paralyzed parts was good and the earlier the return of the irritability the more favorable was the outlook. There was great danger of recurrence. In multiple neuritis, if the patient be young and vigorous and the cause one that can be removed, if the paralysis is not complete and does not rapidly extend, and if the constitutional symptoms are mild, the prognosis is favorable. As far as he could learn there was no special liability to recurrence in parenchymatous neuritis. In the treatment the first thing was to remove the cause, which in the majority of cases was alcohol, the various indications must then be met. Amongst drugs none were more efficient than strychnine, and its use should be continued for a long time. Later on galvanism and faradism could be used. In any case treatment should be persisted in until recovery was complete.

DR. A. W. HOISHOLT, of Stockton, in opening the discussion, said: The subject is a broad one, but I think the author has gone over the field pretty well, and especially as regards the ordinary form of peripheral neuritis. Dr. Brainerd speaks in his paper of Bell's paralysis, an affection of the facial nerve. I want to mention, in this connection, a case that I have seen within about nine months, which is not very common as regards cause. It was due to pressure, but pressure of a peculiar kind. The case presented symptoms of facial paralysis; there was loss of taste on one side of the tongue; no inequality in the position of the soft palate on the two sides. The hearing was affected, but on examination it was found that there was an abscess in the middle ear, and after puncture of the drum and escape of the pus, the case was cured within five or six weeks. The neuritis was due to the pressure of the pus, and possibly some inflammation set up by the pus collected within the middle ear. It affected the nerve above the place where the chorda tympani is given off. In Dr. Brainerd's paper it is the polyneuritis, or multiple neuritis that has interested me, as it is sometimes seen in connection with insanity. He mentions a great many forms of multiple neuritis. These forms are probably represented by many different causes for the same disease. Beri-beri is the name of a form which the doctor mentions as occurring in the tropics. A friend of mine, who was an army surgeon in the Dutch army on the Island of Java, and who had charge of a military station some distance from Batavia, told me that he had frequently seen cases of beri-beri, at one time having more than a dozen under his care. These cases usually terminated fatally—very few got well. The disease seemed to attack the young, robust soldiers, while the natives were very seldom affected, and the termination of the disease, where it was fatal, was usually a neuritis of the phrenic nerve which causes dyspnea by interfering with the movements of the diaphragm. There is another form of polyneuritis which Dr. Brainerd refers to when he speaks of mercury as a cause. It is only within the last few years that especial attention has been directed to what is known as polyneuritis mercurialis. Dr. Leyden, of Berlin, mentions the case of a young man who had taken the inunction cure for a long time. After stopping this treatment for about three days the usual symptoms of neuritis set in—severe pain, with paralysis in the extremities, ataxic gait, and other symptoms of a disease now generally described as Déjérine's neuro-tabes or peripheral pseudo-tabes. This is nothing but another form of multiple neuritis. In this connection I will say that Prof. Leyden, who does not believe that tabes is caused by syphilis, recommends not to give mercury in that disease, as he thinks it might hasten the atrophic changes, rather than help them. With regard to the polyneuritis as it is seen in connection with insanity, it is only during the last few years that it has been described. A Russian physician, Korsakow, reported cases in 1889. He found multiple neuritis associated with mental symptoms which he thought entitled the disease to a place among the different forms of psychoses, and he found that in this form of psychosis there were always symptoms of polyneuritis or multiple neuritis present. It was difficult to determine the beginning of the disease, because it was always associated with severe somatic diseases, such as typhoid, puerperal, tuberculous, cancerous diseases, or a great many forms of intoxication. He found that the mental symptoms went hand in hand with the symptoms of multiple neuritis. There is first usually a severe vomiting and great prostration; then pain sets in in various parts of the body with paralysis of the extensors in the lower extremities, especially of the thigh and toes. This may extend to the upper extremities and attack the extensors of the finger and hand, and even go to the trunk and affect the diaphragm or heart, terminating in death. The symptoms of mental disturbance are very characteristic; amnesia is always present. This amnesia may include not only the period of the disease, but may extend back to some little time prior to it, and in a few instances away into the past, so that the patient will not even know his own name. The mental symptoms begin generally with mental depression—moodiness, followed by agitation and irritability. At this time the patient will still be conscious of what is going on. After awhile the consciousness becomes clouded, resulting finally in a loss of memory. During the stage of excitement attacks of fear often come upon the patient, especially in the night, with visual and aural hallucinations. The patient may finally become somnolent, and frequently may die, either with symptoms of affection of the phrenic nerve or of the vagus, heart paralysis resulting. Within the past year or two cases have been reported in which cerebral nerves, for instance the vagus, have been found affected like the spinal nerves. In such cases a fatty degeneration of the myeline sheath, with atrophy of the axis-cylinder and segmentation of the nerve fiber, are found. The pathological changes have even been traced to the brain, where an atrophy of the ganglion cells, with proliferation of the connective tissue, have been discovered. With regard to duration, this form of psychosis varies greatly; sometimes it lacks but a few months, as Dr. Brainerd mentions. He speaks of the mental symptoms, when he says that dementia is often present. The case may terminate in recovery, even after a year or two. The cause of this form of psychosis due to or connected with multiple neuritis, is a toxic condition of the blood. We find toxic substances suspended in the blood, and it is, therefore, not to be wondered at that we find this polyneuritis in alcoholism. Korsakow has found it to occur in individuals who were not addicted to liquor. He reports 30 cases in alcoholics, and 16 cases in non-alcoholics. Late authors agree that this form of psychosis may occur in individuals who are not addicted to liquor. The pathology of the disease has not been ferreted out, but we always find the symptoms of polyneuritis in connection with these characteristic mental symptoms—this peculiar form of loss of memory. Korsakow has given the disease the name of cerebropathia psychica toxemica.

Dr. C. G. Kuhlman, of San Francisco: The question of primary neuritis is a mooted one. Peripheral neuritis, as a complication of certain diseases, is of quite frequent occurrence, but simple, uncomplicated primary neuritis is denied by some very great authors. I listened in vain for the author to dwell upon the specific causes of neuritis, such as tuberculosis and syphilis. It is my impression that in all cases that have been thoroughly investigated, syphilitic or tuberculous changes have been demonstrated as the etiological factor concerned in extensive peripheral neuritis, where we cannot allege some non-septic condition, or where it was a complication of gouty or rheumatic conditions. The nerve fibers of the peripheral nerves are extremely immune, as it were, against all the non-specific diseased conditions, such as calcareous deposit. Calcareous and lardaceous deposit is very rare; in fact, it has never been thoroughly demonstrated that these deposits took place within the peripheral nerve tissues. Granulation necrosis, marked by syphilis and tuberculosis and leprosy, have been demonstrated frequently, and also fatty degenerations. Reynaud has described a condition which has received the name of Reynaud's disease, in which he demonstrated peripheral neuritis, and a condition which is marked by anesthesia of the extremities, finally resulting in vaso motor paresis, due to a central deposit of tubercule. In non-specific neuritis I do not believe in the application of electricity, at least not until the condition is chronic, because we have already an irritable condition, and it would be very easy to intensify that condition by passing electric shocks through the nerve fibers. I think rest is what is indicated in peripheral neuritis, and I think a good many cases of peripheral neuritis are due to over-stimulation or over-irritation by electricity in the primary stage, or in the acute stage. I do not think alcohol is a very important factor in peripheral neuritis, except where the neuritis depends upon a central condition, the result of prolonged anesthesia and irritation.

Suggestion as a Therapeutic Agent.—J. W ROBERTSON, of Livermore read a paper upon this subject. He did not propose to discuss the production of artificial somnambulism or to enter into the methods of Mesmer, Braid and others, but rather to deal with the unconscious suggestion that is a part of the daily practice of medicine. In order to understand this unnamed and even unconscious force it is necessary to thoroughly comprehend the influence that the mind is capable of exerting over the body. That this influence may, at times, be prenatal our most scientific psychologists assert. The speaker cited cases reported by Spitzka in support of this view, as well as one detailed by Tuke, where an organic change of the nature of an injury had been sustained by a woman who had witnessed an accident. If the mind can act so powerfully as to inflict actual wounds upon the body, unquestionably it can and does act more powerfully for the relief of bodily ailments, especially in such cases as have hysteria for a basis. The cure of scrofula by the laying on of kingly hands, the speaker said, was no myth, nor were the recoveries placed to the credit of shrines of saints, either doubtful or miraculous. The elimination of scurvy from the army of the Prince of Orange, the weapon salve of Sir Kenelm Digby and the metallic tractors of Perkins, were all examples of faith, as the keynote of the cure. They were but the prototypes of the metallic rings, the electropoise, the Keeley cure, and a thousand and one other contrivances that effect the body simply because they psychologize the mind. The electropoise was a contrivance which, the speaker said, had been highly recommended by many of his most intelligent friends. This apparatus, one pole of which was placed outside the house, absorbs oxygen from the air, reduces it to ozone and then carries it into the general circulation through the other pole. The result is that if the patient be sick he is cured, and if well he is made to feel better. Another method of obtaining the same result is sometimes known as homeopathy. Probably the most gigantic and wide-reaching mind cure of modern times is that known as the shrine of Our Lady of Lourdes. The result of this has been of incalculable benefit to humanity; for thousands suffering from hysterical joints, and possibly organic disease, have been restored by faith in the healing virtue of the waters. Faith cure, though generally known as Christian science, was an example of the influence of will power over disease. In the practice of medicine the physician passed through various stages, in which, while at first willing to adopt any remedy, he has gradually discarded many of them until only a few, in the use of which he had become especially expert, remained. The speaker recalled the fact that the late Dr. Toland, one of his preceptors, confined himself to a few remedies. There are certainly proceedings in the cure of disease into which the element of suggestion largely enters. Thus, hypodermic injections of water were often as efficacious as where morphine was used. He recalled a case recently seen in which plain water injected proved as efficient as a daily dose of twenty grains of morphine. Above all other remedies electricity was the one appealing most to the imagination, and very often the effect obtained was purely psychological. Gynecology presents, probably, the widest field for the study of unconscious suggestion. This added to the fact that the majority of hysterical cases are found amongst females, and that every hysterical woman believes that the source of her disease is either the uterus or ovaries, allows full scope for mental treatment. In these cases it was often possible, by doing something, to obtain positive relief from many symptoms. Surgery presents unrecognized yet important conditions which properly belong to suggestion, and the administration of an anesthetic was a good example of this, and there was no better procedure to produce hypnotism than the manipulations which it involved. He did not mean to say that all anesthesia was hypnotic sleep, but he was certain that many times a person becomes unconscious, remaining so throughout the operation without being under the influence of the anesthetic. In conclusion, he said, by special request of two San Francisco surgeons, he would illustrate the curative advantages of surgical procedures that failed to remove any lesion. About two years ago Dr. Shiels had presented to the Society a series of trephining operations where the cortex had been scraped for the cure of epilepsy. The immediate results were very encouraging. Subsequently relapses had occurred in all these cases. Another case was that reported by Dr. Sherman. The patient, a girl 15 years of age, of highly nervous organization, tripped while going home from school, and immediately felt a sharp pain in the hip. This was followed later by excruciating pain in the joint; the leg and foot assuming the position of complete luxation. An attempt to reduce these were unsuccessful, and after a month she was sent to the hospital. It was decided to operate, and under ether an incision was made for the purpose of clearing out the acetabulum and replacing the head of the bone. It was found, however, that the head of the bone was in place, and that the case was simply one of hysterical joint. The same day the patient moved the foot, and in a few days she had thoroughly regained the use of her limb.

DR. E. H. WOOLSEY, of Oakland: Personally, and on behalf of a great many members of the profession, I protest against the acceptance of such views as those presented by Dr. Robertson.

DR. G. F. SHIELS, of San Francisco: I endorse certain facts stated in the paper. Sometime since I thought I discovered a cure for epilepsy, but found I had not done so, and I quite agree with Dr. Robertson that the cases he mentions, and upon which I operated, were cases of suggestion. In cases where patients had imaginary tumors in the abdomen, I have, on one occasion, cut down through the skin of a patient who was supposed to have a tumor in the descending colon. He thought so, and so did some of the doctors. I did not agree with them, and made a suggestive incision through the skin below the umbilicus, stitched it up, put him in bed, treated him as if he had been the subject of an abdominal section, and the tumor disappeared. That is an endorsement of some of the statements made by Dr. Robertson. I cannot forget the fact that this is so, and I think he has courage in getting up before a society of scientific men and pointing out that there is a great deal in our profession that belongs to the realm of suggestive medicine. Only two years ago the doctor showed us, beyond all question of doubt, that the Keeley cure was nothing more or less than an example of suggestive medicine. The paper, perhaps, goes a little too far, but it is better to be a little dogmatic and a little overstrung in one's statement if you can bring about a good result.

DR. WOOLSEY, of Oakland: The Keeley cure is hardly suggestive medicine. I have investigated it somewhat. The paper seems to be very well thought out and prepared along the lines followed by Dr. Robertson, but I think those lines are faulty lines, and they are not in scientific channels, and are not *en rapport* with scientific medicine. They are rather in harmony with quackery, and along the lines of quackery, and far away from those of legitimate medicine. The idea just expressed most emphatically that anything is legitimate in the treatment of a case, I think strictly in line with quackery. The spectacle of older physicians getting away from the strict lines of physiology and therapeutics is a melancholy one. I think I showed that electricity is always hurtful or helpful and that it does not belong to suggestive medicine; that it is as potent an agent for harm as it is for good, and is no more in the line of suggestion than is morphine, or atropine, or iodide of potassium, or quinine, or any other therapeutic agent, and that in all cases it does either good or harm. The idea of the electropoise doing anybody any good by the absorption of oxygen is the basest fallacy. Electricity does not gather up oxygen from a pan of water and carry it into a man's foot. That is the greatest absurdity on earth.

DR. ROBERTSON, of Livermore, in replying, said: Dr. Woolsey is well known to be an able physician; a man whose brain is still in the zenith of its power. Is it possible he imagines that for a moment I support the electropoise or believe that it does produce oxygen out of the atmosphere? I gave that as an illustration of the fact that people are often affected by various kinds of "isms" and "pathies," and that people are often cured, not by the efficacy of drugs, but simply because of the bare fact that the mind is acted upon. In other words, that it was suggestion, and not medicine. It was simply manipulations, and very often not the medicine that they were using, or the surgical procedure that was resorted to, that resulted in cure. Above all things, I do not want to be considered as believing in operations by gynecologists for purely mythical diseases. I consider it one of the greatest disgraces of our profession, as at present conducted. The way women submit themselves to gynecologists, and the number of operations performed, is outrageous. All these things could be accomplished without the operations. I simply gave that as a proof of the fact that all medicine is full of suggestion, and that very often it is not the medicine or the surgical procedure that cures, but the mental effect produced by them.

Report ot Special Committee on State Library.—In the absence of the Chairman of this committee, W. A. BRIGGS, of Sacramento, J. H. PARKINSON, of Sacramento, presented a brief report. He said the committee had met with the Trustees of the State Library, and had been much encouraged. The Trustees had assured the committee that out of the available funds a fair proportion would be spent on the medical department of the library. The Chairman of the committee was requested to furnish from time to time lists of books for the approval of the Librarian, and as far as possible the new works recommended would be obtained. Dr. Briggs desired that the committee be continued, unless it was desired to make it a permanent one.

Report of the Board of Examiners.—This report was read by the Secretary, C. C. WADSWORTH, of San Francisco. The number of meetings held during the year was 12; certificates granted, 299; applications refused, 9; applications withdrawn, 6. The report of the Treasurer of the Board showed that the total receipts for the fiscal year, there being no balance shown from the previous year, had been $3,125.00; the total disbursements being $3,125 00. The recipts showed that the revenue from advertisements, register, and sale of copies of registers had been $1,620,00, and from applications for certificates $1,505.00. With this income the Board had been able to publish the Official Register, and to pay its expenses, including salary of Secretary and extra clerical labor, without reporting a deficit. [The financial portion of the report was referred to the Executive Committee.]

Report of Secretary.—The report of the Secretary, W. WATT KERR, of San Francisco, showed that there were 340 active members on the roll of the Society. During the year — members had resigned, and — had been dropped for nonpayment of dues. [The report was referred to the Executive Committee.]

Report of Treasurer.—The report of the Treasurer, J. H. PARKINSON, of Sacramento, showed that he had received during the year $2,005.65, and disbursed $2,948.70. The amount of cash on hand was $1,728.66. [The report was referred to the Executive Committee.]

Selection of Place of Next Meeting.—DR. W. LE MOYNE WILLS, of Los Angeles, extended a cordial invitation from the Los Angeles County Medical Society to hold the meeting of 1896 in that city. Several members spoke in very complimentary terms of the reception accorded the Society on the occasion of its former visit, and the southern city was unanimously selected.

Election of Officers.—The Society then went into the election of officers, with the following result:

President	W. Le Moyne Wills.
First Vice-President	Geo. C. Chismore.
Second Vice-President	H. G. Brainerd.
Secretary	W. Watt Kerr.
First Assistant Secretary	H. Bert Ellis.
Second Assistant Secretary	C. C. Wadsworth.
Treasurer	J. H. Parkinson.
Board of Censors	C. L. Bard, J. H. Utley, W. Lindley, J. H Davisson, W. B. Lewitt.
Board of Examiners	H. H. Hart, W. B. Lewitt, C. C. Wadsworth, W. E. Hopkins, G. J. Fitzgibbon, W. F. Cheney, J. M. Williamson.
Alternates	J. H. Barbat, F. B. Carpenter, A. P. Woodward.

Dr. Winslow Anderson.—In the matter of the charges preferred against Dr. Winslow Anderson, of San Francisco, and which had been referred to the Board of Censors, two reports were presented. The majority report, signed by W. F. Cheney, T. B. De Witt and R. F. Rooney, found that the evidence was sufficient to sustain the charges of unprofessional conduct, and recommended that he be reprimanded. The minority report, signed by Washington Dodge and J. M. Williamson, found that the offense charged was not sufficiently grave to necessitate action on the part of the Society. These reports were read by the Secretary. The President having instructed the Society as to the proper procedure under the constitution, motions were made to take action upon the reports at a future session. It being understood, however, that Dr. Anderson was present and desired to have the matter brought up at once, a motion providing for this was put and carried.

The charges which were contained in a letter from Dr. H. P. Moore, Chief Surgeon to the Colorado Midland Railroad, at Colorado Springs, addressed to the Board of Examiners of the Medical Society of the State of California, enclosing a letter from Dr. Anderson, addressed to a Mr. Connor, of Colorado Springs, were then read by the Secretary. The following are the letters:

"*Colorado Springs*, September 17, 1894.

Dr. C. C. Wadsworth, 526 Sutter street, San Francisco:

Dear Doctor—I enclose herewith a letter handed to me this morning by a Mr. Conner, a patient suffering from pulmonary tuberculosis. It seemed very strange to me that a regular physician, occupying an official position on the State Board of Health, should lend his name to such questionable practice, and I would recommend that measures be taken to put him in his proper light before the profession and the public. Yours, very truly,

H. P. Moore, Chief Surgeon, Colorado Springs."

The letter referred to in the communication from Dr. Moore is the following, which was written on the official paper of the State Board of Health:

"California State Board of Health,
San Francisco, September 13, 1894.

Dear Sir—Mr. Edwin Joy handed me your letter of September 6 relative to your disease. In reply I beg to say that I have succeeded in curing many cases of consumption, some of which have been very far gone. My treatment is one that I learned in Germany, and is probably the best method of treatment in existence to-day. I would advise you to come to California as soon as possible, as your treatment will require careful attention. The expense of the treatment amounts to but very little, and we shall make it as easy for you as possible. I may add that the treatment consists in the inhalation of remedies in the sleeping room impregnated with medicine, so that every breath you take contains the healing medicine. Kindly let me hear from you at an early date. If your physicians where you are have given you up or next door to it, come to California at once and everything will be done to keep you on earth as long as we can. Very truly yours, Winslow Anderson (per D.).

[Dictated.]

To C. B. Connor, Esq., Colorado Springs, Colorado."

Dr. Winslow Anderson having been called to the platform to be heard in his defense, said the letter was dictated by him hurriedly to his typewriter. It was not read by him after it was written. Had he read it he assured the Society the phraseology would have been changed. Instead of using the word "cure" the word "relieve" would probably have been used. He did not desire to take any blame whatever from off his own shoulders. He was responsible for the letter, although it was written hurriedly without his reading it, and signed by his typewriter. He wished to say also that this great unprofessional conduct came from a gentleman with whom he had had a little tiff on the floor of the Convention of the American Medical Association, at Nashville. The speaker had succeeded in getting the Nominating Committee to come to California in 1891. The gentleman from Colorado opposed him strenuously on the floor, and when it finally came to the general session he succeeded in having them go to Washington instead. The patient he knew absolutely nothing about. The letter had been sent to him, and he had replied to it. The patient was suffering from pulmonary tuberculosis with hemorrhages, and knowing the altitude of Colorado to be about 8,000 feet, he advised him to come to California, or near the seashore. Certainly the mountains were not the place for a patient having hemorrhages. The way that the case was sent to him was as follows: A patient was in a certain drug store in San Francisco about the same time, having hemorrhages. He had placed him in a room where the temperature was 65° for five months, and he inhaled creasote continuously. During that time the lungs seemed to do well; he picked up rapidly, that is, he gained 25 pounds. This gentleman in Colorado had heard of this particular individual, and wrote to ascertain what it would cost. The only thing that he had to regret in the phraseology of the letter was the word "cure."

The Society then went into executive session, when, according to the minutes, after considerable balloting, the majority report of the Board of Censors was sustained by a vote of 37 to 9.

THE PRESIDENT then delivered a brief, but impressive reprimand, in which he dwelt especially on the apparent want of familiarity with the ethical principles that had governed the fathers in medicine on the part of younger members of the profession, and which it would be well for them to study.

The Closing of Suburban Cemeteries.—W. R. CLUNESS, of San Francisco, introduced the following resolution, which was referred to the Executive Committee:

Resolved, That it is desirable immediately to restrict interments in suburban cemeteries, with the object of closing them at the earliest possible date, and that cremation be encouraged as the safest and best method of disposing of the dead.

EVENING SESSION.

Dermatology and Venereal Diseases.—The report of this committee was read by the Chairman, R. L. RIGDON, of San Francisco, his subject being "Quackery in Genito-urinary Diseases." He said for the purpose of this article, all who were doing business in an illegitimate way, whether licensed or unlicensed, would be considered quacks. While nearly all departments of medicine were represented, the majority of the "specialists" had selected that devoted to genito-urinary diseases. This was doubtless due to the following causes. (1) The common desire for health. (2) The sexual instinct being universal, and exerting a tremendous influence on the individual. (3) The abuse of this instinct by a large proportion of males. For these reasons there were a large number of persons that were diseased, or that could readily be impressed with the idea that they were so. As a rule, the quack was as ignorant of the subject as the patient he pretended to treat. His method was to extract money from the pockets of the unfortunate without any reference to their condition. Sterility, impotence and insanity were the three evils that the future threatened. From these there was one avenue of escape, the "doctor," as he alone possessed the "wonderful remedy" by which recovery was possible. When apprehension for safety, and confidence had been established, a satisfactory monetary arrangement was soon made. This was invariably in advance, a guarantee of cure being given, even in cases where a diagnosis of grave and well marked organic disease had been made. The evil influence of these false statements and the pertinacity with which they adhered to the minds of the victims was amazing;

explanations and assurances to the contrary being ineffective in shaking them off. The speaker said, having met a number of these cases, it had occurred to him that if he could obtain a more intimate acquaintance with the methods of the quacks, he might be better able to correct the false impressions they created. The following was a synopsis of interviews taken from reports of medical students who kindly gave their time for this purpose. *Consultation at the office of Dr. Putman:* Patient stated he occasionally had nocturnal emissions; had read that semen often passed away in the urine, and thought his might be doing so. Q. How long did you masturbate? A. Four or five years. Q. Have you any discharge? A. No. Q. How often do you dream off. A. About once in two or three weeks. Physical examination: Testicles not in good condition; applied electric current to them; said they did not react properly; told patient to urinate. A few drops of colorless solution was added to the urine and a precipitate obtained which was pronounced semen. Told patient he was in a very bad condition; that if the trouble was not checked he would lose all sexual power; his kidneys might become affected; that he would also be liable to have brain trouble, and that he should not think of getting married until he had been treated. Would charge $25 for treatment. *Consultation with physician calling himself Dr. Sweeney:* Q. What is the nature of your trouble? A. Nocturnal emissions, and afraid semen is passing in the urine. Then followed the usual questions, the answers being strictly within the normal. Physical examination: To the urine was added a colorless solution, which threw down a precipitate. Diagnosis: Continued loss of semen, and beginning Bright's disease. Prognosis: Very bad indeed without treatment. Patient might die in a few months or might have brain trouble develop. Would effect a cure for fifty dollars. *Consultation with Dr Putman:* Patient stated that his left testicle sometimes hung lower than the right. Doctor applied electricity to testicles and stated left one was in a very bad condition, and if not treated would, in a very short time, be beyond human help, and would have to be removed. This operation is a very dangerous one, and could be done only by experts. With a stethoscope he auscultated the kidneys and pronounced the left one affected. Said the disease had extended upward from the testicle and almost ruined the kidney, but with immediate treatment he could save it. Demonstrated semen in the urine, and said patient would soon be unable to reproduce his kind. That his mind and constitution would soon be run down; that if he should catch cold, fall or strain himself, the testicle would at once swell up, become useless, and necessitate its removal. He, the "doctor," could effect a complete cure in two or three months, at the rate of $20 per month. At the German Medical Institute the patient gave a normal history throughout, but in spite of this, a diagnosis of spermatorrhea was made, and the patient assured that the amount of semen in the test tube (the doctor had previously thrown down a precipitate from the urine) represented ten drops of blood, and that many times that amount was unconsciously passed every day. That in a year complete impotence would result, and health be shattered by the constant drain. Was promised a certain cure in four or five weeks. Would give guarantee. Charge $25. At Dr. Jordan's and Dr. Josselyn's, similar experiences were met, Dr. Jordan making the cheerful statement that about 90 per cent. of the imbecile were rendered so by masturbation, but that he would not positively assert the patient would be so affected. The foregoing is the kind of advice and counsel that is being given daily in San Francisco, in fifty different offices. How many persons come under the care of these charlatans during the year is not known; but the number must be large. Patients are drawn not alone from the city, but from the country as well. By means of advertisements and circulars, every home in California is being visited, and could the facts be known, I have no doubt it would be found that every village and town in the State contains one or more who have been at some time duped by these tricksters. Here is an evil, that if corrected at all, must be corrected through the efforts of the medical profession. His own conviction was that a judicious and vigorous application of legal measures would have the most wholesome effect. This, coupled with proper education of the people, would in time reduce the evil to a minimum.

DR. J. ROSENSTIRN, of San Francisco, in opening the discussion, said: Quacks have certainly existed at all times and in all branches of our profession. The successful ones among them possess some prominent features in their character; they have shrewd business methods which make them successful. The speaker mentioned the case of a quack in London, in the 40's, who pretended to be a "specialist" for stricture of the rectum, and who was flourishing in an unheard-of manner. In one of his rooms eleven male patients were distributed on sofas, all with bougies in their rectums, and all having on trousers specially prepared for the purpose. A lady called upon him to be treated for constipation, and was persuaded by the quack that she had stricture of the rectum, and a bougie was introduced. The husband of the lady armed himself with a cowhide and proceeded to the office of the doctor, with the intention of chastising him, but soon found himself on a sofa in the office, with a bougie in his rectum, having been persuaded that he, too, was suffering from stricture of that portion of the intestine. These men, by their methods of advertising and by "runners" often build up a large and remunerative practice entirely impossible to obtain in the ordinary and regular way during the same time. It seems to me that the great and good people, educated and illiterate, want to be humbugged. The miraculous, the mysterious, the inexplicable, appeals to their feelings and to their purses. How otherwise could we explain the vast pilgrimages to the holy waters of Lourdes, to the holy coat at Treves, and to the various places where holy bones with curative powers are exhibited? This great and glorious country is a veritable El Dorado for quacks, for nowhere in the civilized world are homeopaths and eclectics numerically and financially flourishing as they are here. In this city we have witnessed the astonishing fact that a number of highly educated gentlemen have framed a law whereby the authorities are forced to appoint a certain number of homeopaths and eclectics as physicians and surgeons to the City and County Hospital. Legally prosecuted quacks are often clothed with a crown of martyrdom by the unsophisticated populace that discovers in them victims of a jealous and envious profession. In some of the Eastern States, only those are granted licenses for the practice of medicine and surgery who have passed an examination before a State Board of Examiners, and I would recommend the united efforts of this Society to reach that goal. A great deal of good might be done by the introduction of laws similar to those which I have mentioned.

DR. G. W. DAVIS, of San Francisco: Dr. Rigdon deserves our thanks for his efforts. I believe the best way to fight quackery is the unification of the profession of medicine. If every member of the profession was a true professional man, we would kill quackery and charlatanism very quickly. We should act honestly with ourselves and with the public.

DR. L. C. LANE, of San Francisco, spoke of the case of a merchant in San Francisco who was persuaded by a quack that he was in a dangerous condition, that his blood was vitiated and that his days were numbered. The specialist pretended to be the only person who had the medicine which would effect a cure, and succeeded in getting the patient's money—some few hundred dollars—and his promissory note for $10,000. After being told by a regular physician what a fool he had been, he went to the quack, armed with a revolver, and demanded the return of his note, which was at once forthcoming. The charlatan shook hands with him and said: "Sir, I did not know you were such a gentleman."

DR. RIGDON, of San Francisco, in replying, said: The story told by Dr. Lane shows that it is not alone those of the poorer classes that are imposed upon. All classes are drawn upon by these men. I hope the presentation of the matter here to-night will be the cause of elevating the profession and the people to such a point that quackery cannot exist.

Diseases of the Genito-urinary Organs a Specialty.—L. BAZET, of San Francisco, read a paper on this subject. He said: Specialists and specialization seemed to be both the consequence and the condition of progress. Medical science in its present development was too vast in its details to permit of any one man grasping all of them. In order to make a profound study of any branch of science it was necessary for the practitioner to limit himself to one particular type of disease. Amongst the specialties ophthalmology was one of the first to be differentiated, and gynecology had now representatives in every part of the world. For several years past diseases of the urinary organs had been specialized at the hands of men like Bigelow, Bumstead, Finger, Thompson, Guyon and others. He desired to call attention to some of the reasons for this differentiation. In addition to the many diseases that attacked the urinary organs, there were certain anatomical and physiological conditions that may in time set up functional diseases, as hypertrophy of the prostate. The physiological relations of the urinary apparatus to other organs explains the large number of secondary diseases that may attack them. In a large number of cases these diseases have a certain influence upon the *morale* of the patient often leading to hypochondriasis, and sometimes to suicide. Urinary neuropaths constitute a class of patients well recognized, amongst whom a slight, or even a supposed lesion is the source of great mental disturbance. The speaker then entered fully into the secondary consequences of many of the affections of the urinary organs. He dwelt especially on the dangerous effects of blenorrhagia, particularly in cases that were supposed to have been cured, and in which the results were not only serious to the individual, but disastrous to the female who might unknowingly be infected. He then mentioned a number of symptoms that the inexperienced were apt to confound with other conditions, but which the specialist would unhesitatingly refer to the proper source. Instances of errors in diagnosis were cited in confirmation of this view, as in many cases this class of patients had first been treated by the general practitioner. To be a specialist it was not necessary to possess a special intellectual organization. It was simply necessary to confine one's practice to a well-defined zone. The specialist must above all be an observer with the true clinical spirit. This rule would require no explanation did we not live in the age of the "exploratory incision," whose tendency was to relegate clinical observation to a second place. Even the passage of a sound was not always proper in diagnosis; this was also true of endoscopy and illumination with the electric light, through which many errors had been committed. Clinical observation was therefore of much more importance in this than in many other branches, and it was only to be acquired by education and persistent work.

Committee on Anatomy.—This report was read by the Chairman, GEORGE B. SOMERS, of San Francisco, his subject being "The Anatomy of the Wrist and Hand with Reference to Cuts and Crushes." He said: Anatomy is a mass of facts. The work of collecting them has progressed so steadily and satisfactorily that the opportunities of adding new ones have become limited. Inducements, therefore, for carrying out original investigations are small, and students appear to take but little interest in this particular line of work. On the other hand, from a practical standpoint, the innumerable facts of anatomy, owing to the complicated operations rendered possible by modern surgical methods necessitate careful study, In accidental surgery no injuries are more frequently met with than those of the hands. Most men depend upon their hands to make a living. Every line is valuable, and, after an injury, it is of the utmost importance to save as much of these parts as possible compatible with usefulness. Generally the treatment of hand injuries is regarded as minor surgery, and not of enough importance to demand accurate anatomical knowledge. But the union of a tendon, the preservation of a point of insertion for a tendon, or the saving of a nerve, may make a vast difference in the usefulness of the hand. The speaker said he had selected a few points which seemed to him of practical importance. Though simple anatomical facts, they are not always remembered when most needed. Where amputations through the phalangeal joints are necessary, much time is saved if we can locate them accurately. This is apparently a simple matter, but, unless we are certain of it, the knife will fail to enter the joint until after considerable search. He then gave the guides for finding the various phalangeal and metacarpo-phalangeal joints. Another practical point in connection with amputation through the phalanges was in relation to their structure. These bones were similar in structure to the longer ones. In dividing them, the bone forceps may be safely and conveniently used on the cancellous ends. The shafts, however, should be divided with the saw in order to avoid splintering. When it becomes necessary to remove the metacarpal bones, the fourth and fifth may be removed at the carpal articulation, but the bones of the second and third should be preserved, if possible, on account of their muscular attachments. The importance of the carpal bones depends on the pretence of the metacarpals. With the exception of the pisiform there are no muscles attached to them. If, after a crush, any metacarpal bones are retained, it is better to preserve as many of the carpals as possible to serve as braces and to facilitate motion. The finding of the ends of severed tendons requires greater anatomical accuracy than any surgical procedure about the hands. Frequently, after injury, the relations of the parts are so altered that it is difficult to recognize them. In the palm of the hand the superficial flexors may, in a general way, be distinguished from the deep by the fact that the latter present along their course the fleshy fibers of the lumbrical muscles. Above the wrist, also, muscle fibres are seen in contact with the tendons as far as the upper border of the annular ligament, whereas the tendons of the superficial flexors, except that to the middle finger, become free from muscle tissue some distance above that point. Of the tendons of the thumb, the long extensor is most frequently injured, and the proximal end is sometimes extremely difficult to find. There is one landmark by which it may be easily found. On the posterior surface of the lower end of the radius is a long prominence, an incision on the ulnar side of which will reveal the sheath of this tendon. In injuries or operations near the pisiform bone, in addition to the ulnar artery, the deep branch of the ulnar nerve is particularly worthy of attention. It runs across the palm of the hand, following the deep palmar arch. Any incision across the deep palmar arch, or base of the metacarpal bones, will cut this nerve and destroy much of the motion of the thumb, as well as several lumbrical and interosseus muscles.

DR. J. HENRY BARBAT, of San Francisco, in opening the discussion, said: Dr. Somers is to be congratulated for being the first who ever handed in a committee report on anatomy. There is very little to be said in discussing a paper relating to anatomical matters, as the anatomy is accurately laid down in our text-books. There is one point I might mention regarding the anatomical relation of the flexor tendons in injuries necessitating the suture of the divided tendons. In a case where the superficial flexor tendon of the middle finger had been cut through two months previously, great difficulty was experienced in finding the proximal end of the divided tendon. I finally succeeded by forcibly extending the three sound fingers, which pulled down the flexor tendon as a whole, and also carried down the divided tendon, which was a part of the flexor sublimus digitorum; and, undoubtedly, without this method we would not have secured it without slitting through the anterior annular ligament, as the tendon was severed near the wrist. By flexing the finger to which the divided tendon belonged, the distal end was easily secured and the two ends sewed together. The hand was bandaged in this position and a perfect result obtained. I am sorry that Dr. Somers did not touch on the anatomy of the hand with regard to inflammatory conditions, as it is there that anatomical knowledge plays a most important part. We have next the skin the deep palmar fascia, which may be regarded as an expansion of the tendon of the palmaris longus muscle, this fascia covering almost the entire palm of the hand and being attached by two slips to the sides of each metacarpo-phalangeal articulations. Accumulations of pus beneath this fascia require very free and early opening to prevent dissection by accumulated materials. The peculiar arrangement of the tendinous sheaths should also be noted. The synovial sheath from the flexor of the little finger joining the general synovial sheath in the palm, which is separate from the sheaths of the other three fingers. The synovial sheath of the flexor of the thumb is continuous up into the forearm. The synovial membranes of the wrist are of great importance with regard to amputations We have five separate membranes between the metacarpals and the bones of the forearm. One between the ulna and fibro-cartilage; another between the radius and cartilage above and the scaphoid, semilunar and cuneiform below; a third surrounding the os magnum and trapezoid and projecting up a short distance between the bases of the metacarpal bones; a fourth between the trapezium and the metacarpal bone of the thumb, and the fifth between the cuneiform and pisiform. The remembering of these anatomical facts is a necessity, more especially in emergency cases, where the surgeon may be called upon to perform an amputation or resection, the success of which will greatly depend on his accurate knowledge of the anatomy of the parts.

DR. L. C. LANE, of San Francisco: This paper is one of extreme value, as surgical treatment of the hand is very important. Dr. Barbat has told us that the palmar fascia is the continuation of the tendon of the palmaris longus. I would like to ask what it is when there is no palmaris longus, which very often is the case.

DR. BARBAT, of San Francisco: It is undoubtedly a fact that in some cases the palmaris longus is lacking, and in these cases the palmar fascia is but the continuation of the deep fascia of the forearm. When the muscle exists the fascia is undoubtedly the expansion of the palmaris longus tendon.

DR. W. WINTERBERG, of San Francisco: In connection with the cutting of tendons I will report a case which occurred not very long ago in my practice. A cook had the misfortune to cut the deep flexor of the index finger. The wound was at the articulation of the second and third phalanges. The attending surgeon sewed up the wound without paying any attention to the condition of the tendon. The wound healed, and the man lost the motion of the third phalanx, and the motion of the second phalanx was more or less impaired. The man was brought to me for treatment. I proposed to try to find the separated ends of the tendons in order to unite them. It was with considerable difficulty that I finally was able to find the proximal end of the tendon. The distal one was easily found, its end was apparently frayed out, a number of small fibers being apparent at the extremity. The proximal end was perfectly adherent in its groove; it was only with difficulty and with the aid of a sharp knife that I was able to dissect it out and free it from adhesion. Union was then effected by the use of a commisure of catgut. Everything went along smoothly, but motion did not return as was expected, and this fact, in my opinion, was due to the adhesions reforming after union of the severed tendon had been effected. I have been unable to find any analogous cases in the literature upon the subject, and I should like to hear of any means to prevent such an accident as that and to make the operation more satisfactory.

DR. L. BAZET, of San Francisco: A French authority advises making extreme flexion when the sheath of the tendon is seized immediately, extreme extension is carried out; the tendon falls on the sheath and is caught and united.

DR. E. H. WOOLSEY, of Oakland: I have treated quite a number of cases of severed tendons of the hands and fingers, and have been universally successful. I have sometimes sutured the tendons with catgut, and sometimes with silk. Where I have used silk there has frequently been a little suppuration, but generally an immediate repair has terminated in a tendinous connection. I read a very interesting paper a few months ago, which spoke of uniting tendons that had been severed in the hand, by using a number of sutures of catgut, and making a kind of train for the deposit of tendinous repair, so that the connecting tissue outside would invade and get between the tendinous ends. Some successful cases were reported. I have not tried that method yet, although I have brought tendons very close together, where they were not quite approximated, and yet have had good repair possibly by the building up of tissue between the ends of the tendons and by the conduct of such repair along the line of sutures.

Committee on Surgery and Clinical Surgery.—The report of this committee [published at page 256] was read by the Chairman, R. A. MCLEAN, of San Francisco, the subject being "Excision of the Rectum for Cancer—Amputation at the Hip."

DR. L. C. LANE, of San Francisco, in opening the discussion, said: I will begin my remarks by congratulating Dr. McLean upon the success of two great operations which he has performed upon his patients, each one of which is very difficult, and in many cases, particularly that of the artificial anus, the work has not terminated so successfully as we see here. Taking up this subject somewhat chronologically, I find that the operation of excising or cutting out the rectum, or a portion of it, for cancer, is a very old one. As early as 1840 there was an operation by Beaumés, of Lyons, France, in which he states that he excised the rectum, and that after nine months he believes the case to be cured. We know to-day, however, that that is hardly time enough to be very sure. In 1843 Denonviliers did the same operation, and he states successfully. He found a great deal of trouble in isolating the rectum from the prostate. These operations are not described very accurately, but I suppose that they were all done from anal end of the rectum. They must have been done so. About the same time a German, Hauser, reports a very remarkable operation, and one which would certainly cope with anything of the present day, namely, a case of cancer of the rectum, in which he excised the anal end (it was in a female); and he also excised a portion of the vagina, which was implicated in the disease. There was perfect recovery, and the woman two years afterwards bore a child, which I think would probably be greater than anything which could be reported in our day. In 1878 the operation was performed and strongly advised by Volkmann. I may say, however, that in our own country we had a great advocate of it, the late R. J. Levis, who introduced an operation, which he thought was original with himself. He performed it, or at least recommended it, and announced it through the press; and he obtained such a notoriety that he was sent for to perform the operation upon a gentleman in this city. That was done, I think, in 1876, upon the brother of Governor Low. The operation of Levis was to make an incision through the lower end of the rectum, immediately inside of the anal end of it, dissect off the parts, and pull down the diseased portion, cut it off, and stitch it to the anal orifice. He endeavored to do this in the case of Mr. Low, and worked faithfully and hard and under extreme difficulties; he had a great deal of hemorrhage, and had a fatal result. The patient died a very few hours afterwards, and it led to the unfavorable comment that it would not have been difficult to have found a half dozen men in this city without sending East, who could have finished up the patient as quickly. Levis felt very much mortified, and told me that he would have been glad if he had not had anything to do with the case. However; it was a very unpropitious one, the adhesions were of such a nature that they were very hard to remove. About the same time the operation was advised by Volkmann, and was performed by him; he announced a number of cases in which it was successfully done. In 1861 Schuh, of Vienna, advised the operation, and particularly when it had not reached the fold of Douglass. At that period all the operators were very fearful of operating when the disease had passed up as far as the peritoneal cavity. Lisfranc advised it also, but only when the index finger could be passed into the rectum and could catch above the part and bring it down; and only in that class of cases would he operate. In 1883 there was a very exhaustive report upon the subject of excision of the rectum for cancer by Piéchaud. He collected from surgical literature 149 cases, with 103 recoveries. About the same period Amelung, a German, and Durham, an Englishman, of Guy's Hospital, I believe, rather discouraged the operation. I heard Durham discuss this matter in the Society of American Surgeons some six years ago. He strongly advised the operation of colostomy—that is, an artificial anus, the same as you have seen here, as done in the case of Dr. McLean's patient. In 1885 Lawson, an Englishman, who is a general surgeon, and I believe also works somewhat as a specialist upon the eye, advised rectal excision; and it seems to me that in regard to this outside operation—that is, excising from behind, the credit is probably due to Lawson, rather than to Kraske, who has generally the name of having done it first. Lawson, in 1885, reports a case upon which he operated successfully by a horseshoe incision, made on the back part of the pelvis, in which he reached in and cut out a part of the coccyx, and succeeded in doing the work successfully, and curing his case. About this same time—that is, 1885, 1886, and 1887, there were three or four celebrated German operators, among whom the credit of bringing this operation forward should be equally divided—Bardenhauer, Genzmer, Kocher, and Kraske. Bardenhauer and Genzmer claimed, or rather determined, that opening the peritoneum in these operations from behind, is not very dangerous, which I think is true from some observations which I have made myself. It does not figure as an element of anything like the danger which it was once thought to be. Genzmer reports ten operations by the posterior median incision, and he cured eight of his cases. Bardenhauer advised a posterior median cut, exposing the coccyx and the lower end of the sacrum, and he divides the latter on a level with the third sacral foramen, leaving the sphincter and also portions of the levator ani. But the great credit for this seems to have fallen particularly upon Kraske, who has modified all this work which had previously been done. His operation consists in making a cut to the left of the median line on the left side of the sacrum, splitting or cutting off a portion of the sacrum near the median line, that is, the left portion of it, and removing the coccyx. He did not take out the entirety of the lower end of the sacrum, as is sometimes done now. He prefaced his first operation by an operation on a cadaver, which is certainly a proper way. It is said that the great Sir Astley Cooper, who was a model to all the world of surgeons, never, so his biographer says, performed a great surgical operation without first going into his private dissecting room and refreshing his memory upon the anatomy of the part; and if that were done universally I am very sure that the statistics in regard to mortality would be very much improved. Kraske found that in his method, by removing the left side of the sacrum he cut away or destroyed the fourth and fifth sacral nerves, and preserved the third. I have performed that operation and have one successful case. It was also done, and as far as I know, first done in this city by Dr. Cushing. His was a remarkably favorable case. The disease was confined to a very small section. It is very difficult indeed to get a case where you do not find the disease diffused or implicating the parts about. The great difficulty is in getting in and dissecting out the portion of the rectum where the disease is without destroying the nerves which will maintain the future motion of the parts That is, though you secure continuity of the bowel, which is the great object aimed at in these methods, and though the anus is preserved and the sphincter ani and a portion of the third sphincter, nevertheless, if you cut off the nerves which supply the anal end of the rectum, the patient will have very little power or control of the part, and that was so with my patient. He did not control his feces in a way which was satisfactory to himself. The trouble in regard to cancer here, as well as everywhere else, is that the patient, as a rule, does not know that he or she has it until it is far advanced, and the system of lymphatics in this part of the body is of such a mesh-like character, so inter-communicate, and passing and radiating in every direction, that where the disease has reached to the extent of breaking down, the molecular particles of it are sure to pass into the lymphatic absorbents, and to get beyond your knife. That is the trouble. If we conld get the cases before we have disintegration or breaking down, and be able to perform an early operation, we would save more patients. This was fortunately the case with Dr. Cushing, whose patient yet remains perfectly well and has absolute control of the bowels. She has since gained some 40 or 50 pounds, and has lived now, I think, something over two years after the operation. That case illustrated that the operation could be done if we took it early enough easily and successfully. In my case I am not sure the man is going to remain well. He did, however, get well and go to work, and he gained 40 pounds in weight, but he had some suspicious symptoms in the bladder the last time I saw him, and I fear that the disease will appear higher up in the pelvic region, where it will be beyond the reach of the surgeon's knife. The post-pelvic method of reaching the cancerous rectum has lately been further modified by an osteo-plastic procedure, in which the bony structures are uplifted with the soft parts, and afterwards replaced and retained in their normal site. Thus doing, the surgeon, after excising the cancerous portion of the bowel, and by invagination restoring continuity, is able to so close the breach that he leaves but a minimum trace of his work.

DR. G. F. SHIELS, of San Francisco: The point that seems to me of the most interest here is that excellent introduction of the preliminary colotomy, which practically puts the surgeon in the position of being able to rest the rectum, to carry away the feces by an artificial anus, and to give him a chance to have a comparatively clean wound. I think that is capital practice, to do the colotomy first, so that all the contents of the bowels may pass away and leave the rectum practically at rest, so that the field of operation may be kept not only clean, but at rest. By performing colotomy you really slow the growth of cancer enormously. Suppose the doctor did not intend to remove this rectum, he at least had taken away the irritation of that cancer, and it seems to grow without irritation to the surrounding parts. I have done this operation several times, with the result that the whole pelvis gradually filled up with a cancerous mass, like a plaster of Paris mould, without producing any very bad symptoms until the very end of the patient's life. In any case I think it is a capital idea, this preliminary colotomy before the operation of removal of the rectum for cancer. One point that has not been mentioned by Dr. Lane is the introduction of the Murphy button in this operation; doing the Kraske operation, removing the sacrum if necessary, and then, instead of using sutures, using the Murphy button. The result of this has been excellent in the hands of not only Dr. Murphy himself, but of Marcy. Marcy went from Boston to Buffalo to do this operation, and did it with a Murphy button, with most excellent results. That will always help the surgeon. It does away with the necessity for the sutures. Suturing is always long and difficult and increases the shock of an operation of that kind.

Dr. C. G. Kenyon, of San Francisco: Statistics show a little less tendency to recurrence in this disease than in removal of malignant disease in other portions of the body, especially in the mammary gland, which has been in my hands a very unfortunate operation. In all my cases it has recurred; whether this was owing to the want of an extensive enough operation or not, I am not able to say. I have had a rather fortunate experience in this line of operation, having recently had three cases of removal of the rectum, with immediate fortunate results in all. If these cases be seen early, or if that type of disease of an epithelial character occurs in the rectum a little above the anus or within four or five inches of the anus, it is not at all a difficult operation, and did not prove, in the cases on which I operated, too much of a shock to the patient. I dilated the anal muscle, and dissected it off the rectum. After passing the sphincter of the anus, it is not at all difficult where there is no infiltration, as there was not in these three cases, to dissect the adjacent tissue off the rectum for an inch or two inches above the diseased tissue. I cut off the rectum, brought it down and stitched it, and then I followed this procedure, which I think was a happy thought. I filled the rectum with lamb's wool, which has a resiliency far beyond any other preparation, which I hoped would serve the purpose of distending the rectum, and prevent any infiltration of fluid, causing an abscess. Those three cases were evidently very fortunate ones. They all recovered without much inflammatory trouble; in fact, two of the cases, if I remember right, had little or no fever. In one of those cases, however, within about one year, the disease recurred. I attempted again to operate on that man, and he did not leave the hospital. Another of the cases was well for a time, but subsequently died of another disease. So far as malignant disease of the anus was concerned, or any other malignancy, there seemed to have been no recurrence. The other, so far as I know, went away from the State well, and I have not heard anything to lead me to know whether or not there has been any recurrence. I have had no experience where there was an extensive infiltration except in this secondary case, which proved fatal.

Dr. O. J. Mayer, of San Francisco: The sphincter should not only be retained, but its function also. If there is a portion of the rectum above the anus so that union can be brought about by bringing down the sigmoid flexure or the upper part of the rectum, it should be imperative. There is an increasing tendency on the part of the mucous membrane to grow lax. Another point in the operation for cancer of the rectum after Kraske's method, is how to retain the coccyx in the lower portion of the sacrum. While evidently these parts do not have a very great significance in the support of the body, they have a great meaning in the support of the rectum. There is sometimes retention of the feces for several days, impaction following, and the patient is unable to empty the rectum. There is apt to be impairment of the sphincter.

Dr. W. Winterberg, of San Francisco: An operation which I have practised consists in the formation of a flap which is formed by an incision in the perineum, which goes in a tolerably large groove around the rectum and unites on both sides behind. The soft tissues, that part of the anus which is not involved and containing the external sphincter, is then dissected out, and the whole flap is turned up. It is then possible to draw down the diseased parts of the rectum, to remove them, and to bring together the mucous membrane. The external sphincter will be preserved, probably, depending more or less upon the extent of the disease. If the disease envelopes some of the pelvic tissues, in which the principal nerves may be imbedded, then the control of the bowels will of course be more or less impaired, but under otherwise favorable conditions I think this method will give a very favorable result. I operated in this case about two years ago, and the patient is still alive and has tolerably good control over the bowels. In another case I lost the patient about a year after the operation. He did tolerably well for about six months, when the pelvic tissues became involved, although he did not have the distressing symptoms from which he suffered before the operation.

Dr. R. H. Plummer, of San Francisco: I remember the case of a surgeon in the east, recently, who says that he has several times made an artificial anus behind, at the point where the coccyx is excised. He resorted to this by reason of the fact that he excised in a certain case so much of the rectum, running so far up towards the sigmoid flexure, that he found it impossible to approximate the two extremities; and inasmuch as the function of that part is sometimes destroyed, as referred to by Dr. Lane, by reason of the destruction of the nervous supply, he thought that this would be a proper method of terminating the operation in many cases, and he found it rather satisfactory. He turned the end of the pulled-down gut outward and made an artificial anus at the point where the coccyx was removed..

Dr. D. W. Montgomery, of San Francisco: A case came to the late Dr. Blake about eight years ago, when I first started in practice here. It presented a small tumor, just in reach of the forefinger, on the posterior wall of the rectum, directly opposite or at the point of impingement of a retroverted uterus. There was no breaking down; I don't think there was any pain; there was no hemorrhage. The doctor took a piece off of this tumor and gave it to me for examination. The examination showed it to be one of the most malignant cancers in this region, and one that is very prone, early, to form metastases in the liver. The case was seen by several gentlemen in this city, and finally was sent to Dr. Gay, of Boston, to be operated on. The operation was done successfully. The second day after the operation there was a tremendous hemorrhage; she got over that. Healing took place, and I asked Dr. Blake about her shortly before he died; I think it must have been fully four years after the operation. There was no return of the disease, and the woman is perfectly well. That shows that an early operation can be followed by good results. But cancer of the rectum is an exceedingly treacherous disease, and exceedingly liable to return. I think it is very rare when a man gets outside the disease line. There is, however, a reason why the operation should be performed, outside of the fact of the mere extirpation of the disease, and that is the ease it gives the patient by cutting the nerves. I suppose the operation itself is a relief.

Dr. D. D. Crowley, of Oakland: Some attention has been given this evening to the saving of the sphincter muscles of the anus in cases of cancer of the rectum. It has been my opinion for some time past that it would be better to destroy those muscles, where there is a cancer in the rectum, that are producing this contraction upon the morbid mass. Suppose there is a cancer the size of your finger, or two fingers, within the rectum, and that you cut the sphincters, both internal and external, and the tissues back to the coccyx, and the tissues anteriorily as far as the urethra or the prostate gland, you can remove this mass entirely. Then use the common needle with the eye in the point, so that you can sew up the mucous membrane and catch it with a forceps and withdraw your needle, thereby in that way doing away with carrying the needle entirely through the tissues. The point that I desire to bring before the society is that the cancerous mass can be removed and the patient may live for several months or years, if the disease is circumscribed. But suppose the entire circumference of the rectum is diseased; I say, then cut away the affected part and draw the rectum down if possible. I do not advocate the removal of the sacrum or of the coccyx in performing this operation. If you cannot reach the cancer with the index finger, I would not advise the removal of it. I would advise the operation of colotomy by itself, and merely treat the disease in a palliative way.

Dr. C. G. Kuhlman, of San Francisco: Secondary infection, or metastasis of the liver, takes place very early. The rectum is very porous, and secondary infection or metastatic processes are of very early occurrence in these cases. Frerichs collected, I think, sixty-eight cases of secondary hepatic carcinoma from primary cancer of the rectum. I feel almost sure that in the course of time Dr. McLean's patient will die from secondary hepatic carcinoma. That seems to be the ultimate history of these cases.

Dr. Shiels, of San Francisco: A boy came into the City and County Hospital, the polyclinic ward, with hip-joint disease, and at that time excision might have done some good, but the people who were related to him wished to get some $20,000 which he owned, and refused to permit the operation, and let him get gradually worse until at last he consented. He was a veritable shadow, lying in bed, with a couple of bed sores on his back and a generally emaciated appearance, so that it looked as if he might die at any moment. Albumin had made its appearance in his urine, showing that there was a change in his kidneys. I took the responsibility of amputating his leg at the hip-joint, and the boy immediately began to build up, and soon was perfectly healthy. In anything like extensive disease of the hip-joint I think it is far wiser to amputate than to try any method of excision or partial excision, or any other operation. Examination shows that this patient of Dr. McLean who had the injured spine has improved since the operation; that he has improved as much as he will improve; that his bladder has improved; that his bladder was at one time affected and it is not affected now. The lower limbs have been treated in every way known to the surgeon for the purpose of trying to get back their activity, without any success. The result is that he is walking around now with a fairly good thigh and a perfectly useless leg and foot. I think the doctor's suggestion of a double amputation in the middle third of the thigh is a capital one, and will give this man a greater usefulness in life.

DR. CROWLEY, of Oakland: I had a patient some three years who had his spine crushed and dislocated. Six weeks after he received this fracture he was brought to the Oakland general hospital, where at that time I was surgeon. He had no control over the bladder or rectum, and complete paralysis of the legs so far as motion is concerned. He suffered intense pain. With the assistance of some of the gentlemen who have been present this afternoon I performed laminectomy of the two last dorsal and the two first lumbar vertebræ, making an incision of six inches over the spine. I produced extension and placed the patient in plaster of Paris, after removing those spinous processes. The wound healed very nicely. I removed part of the sacrum before I finished the case. I closed up this opening, and the patient increased in weight from 115 to 165 and 170 pounds. I had this patient going around on four-wheeled crutches—a crutch with four supports, with wheels under each support, so that he could propel himself along, though he never had the ability to straighten himself up to extend his legs. While the spinal cord itself was injured and partly destroyed, I felt that a certain motion was coming back to those legs, and I said, "Leave those legs upon the patient and let him propel himself the best way he can—put on splints or anything, so as to keep the legs straight." I received letters from him from time to time last year giving me his weight; he has no sores on his body, and some motion has come back to his legs.

DR. KUHLMAN, of San Francisco: This is without doubt the result of atrophy of the spinal cord. I do not believe that it is progressive in character, inasmuch as improvement has taken place in the bladder. I think that this man should be given a chance. I think that steel braces properly adjusted to those legs would afford him proper means of locomotion upon his natural legs. Every artificial means should be exhausted before we resort to amputation, because the paralytic condition of these limbs may simply be due to the inactivity of the muscles during the long confinement in bed. Perhaps the muscles may improve through use, and in the course of a year or two he may have a pair of good legs. I have seen such results before in similar cases where there was almost complete atrophy of the muscles of the legs.

DR. SHIELS, of San Francisco: I believe I am right in stating that this man's muscles in the legs and feet have absolutely refused to react to any stimulant at all; in fact, they are dead.

DR. MAYER, of San Francisco: The prognosis is a great deal better in laminectomy as carried out in the lower part of the spine than in the upper dorsal region. I have at present a case under my care. A man was injured in an elevator accident a year ago. The case was very much neglected, having been in a plaster of Paris cast, for no apparent reason, from the neck down to the toes, resulting in absolute immobility of the lower extremities. and it was necessary to bend the knee with a vertical fracture of the patella. At present the patient is getting along well. He is on crutches for the first time in ten months, and he is able by throwing his leg forward to walk a few steps. The bowel, which at first was completely paralyzed, he has under control, while his bladder, fully paralyzed in the beginning, has not quite recovered. It will hold two or three ounces of urine in two hours. In the mean time, through the urinal which is attached, he will pass from three-quarters of an ounce to one ounce of urine unconsciously. I would emphasize the fact not to wait too long to perform laminectomy, until changes have taken place in the cord that cannot be repaired.

Dr. McLean, of San Francisco, in replying, said: The discussion has so completely covered the ground that I hardly think there is much to say. In reference to the two cases, I would explain that my reason for performing the preliminary colotomy was that the extent of the growth was so great that it was impossible to get the sphincter above it. It was not possible to ascertain its full extent, and the preliminary colotomy was to give the patient temporary comfort. After the subsidence of the acute symptoms resulting from the operation I examined the cancer and was convinced that it could be removed. The operation of inguinal colotomy is so simple that it adds nothing to the danger, and gives us the means of securing asepsis of the operation wound in the removal of the cancer. Regarding the operation of laminectomy my experience has been unsatisfactory to this extent: That while some improvement has followed in every case, there has been nothing like a return of function. In all the cases that I have operated on it is true that a considerable time elapsed after the injury before the operation was done, so that atrophic changes had probably already taken place in the cord. One object of the paper that I read was to bring out the advantage of a well-made artificial leg over the present amputation of the foot.

THIRD DAY—THURSDAY, APRIL 18—MORNING SESSION.

Early and Radical Operation for Cancer of the Breast, with a Few Symptoms for Early Diagnosis.—Oscar J. Mayer, of San Francisco, in a paper upon this subject, said: A large number of general practitioners to-day share in the belief of the laity that cancer is incurable. In an early and radical operation lay the whole secret of success. Statistics of operators formerly showed a large percentage of recurrences, Billroth's cases giving nearly 82 per cent. The most recent researches into the causes of recurrence in cancer of the breast are those of Heidenheim. His results may be formulated as follows: (1) The pectoral fascia is extremely thin and its limits very uncertain, so that to dissect it without leaving portions of it adhering is an impossibility. Where fat and areolar tissue is abundant it is well-nigh an impossibility. (2) In thin women the mammary gland is thin, but in stout women small portions of it adhere to the neighboring fascia and muscle, and consequently, after extirpation of the gland, it is very probable that small portions of it will still remain. (3) It is a positive fact that if the mammary gland contains even a small cancerous nodule it is diseased throughout its whole extent. The epithelial cells of the acini and the connective tissue become quickly involved; the lymphatics of the mamma carry these epithelial cells to some distance, and a frequent cause of recurrence of the disease is due to acini remaining after the extirpation. (4) In conjunction with blood vessels, lymphatic ducts stretch from the glands deep into the retro-mammary fat. In two-thirds of the cases examined, cancerous metastases were found in these lymphatic ducts reaching in this manner the pectoral fascia. (5) The pectoralis major is usually healthy if the tumor be in no way attached to it, but it is, however, diseased when cancerous nodules are found adherent to its fascia, and also when the body of the tumor is found attached to it. Probably the disease is introduced into the muscle through and by the lymphatic ducts. (6) Possible, also, the contraction of the pectoral muscle caused by motion, as well as the lymphatic stream, aids in carrying the infection to the surrounding tissue. A muscle infected with cancer seems to be diseased in its entirety. To these facts, gained by careful scientific research, the speaker added two factors, which clinical experience had taught were of value. (1) Avoidance of all rough and unnecessary manipulation of the tumor, either before or during the operation. (2) The knife should be sent through perfectly healthy tissue, less by direct inoculation epithelial cells may be transplanted. He then reported a case illustrating the danger of manipulation in these cases. Clinical experience has shown that carcinoma is an infectious disease and that it is auto-inoculable. To-day we can safely predict that after an early radical operation recurrence will take place in less than 50 per cent. of cases during the "three-year limit." The speaker said the *technique* that should be accepted was that of Halsted. He alluded to cases of partial removal, in one of which, where the breasts were largely developed, about one quarter of the diseased organ had been allowed to remain for the psychical effect. In all of these cases there had been early recurrence. Alluding to that form occurring in aged women, and recognized as atrophying scirrhus, he said that while this was of very slow growth, as it gave rise to metastases, the same rule should be involved in its extirpation. In conclusion, the speaker submitted a new symptom that might in many cases assist in an early differential diagnosis, in view of the importance to be attached to the immobility of a suspected growth in or involving the whole of the mammary gland. He referred especially to small nodules that are deep-seated in or beneath the parenchyma of the gland. If these growths of carcinoma be examined while the arm hangs loosely in a natural position, they will be found to be quite readily movable, which motion is, however, only apparent, being really that of the passive pectoralis major muscle. Let the patient, however, raise her arm at right angles to the body, and instruct her to resist adduction of the arm, and it will at once be noticed that the nodule has only very limited motion or may be entirely immobile, while the mammary gland is as movable as before. This symptom admits of easy interpretation; the lymphatics running from the gland toward the pectoral fascia carry the infectious material there and cause infiltrations long before the whole gland is extensively involved.

DR. D. W. MONTGOMERY, of San Francisco: I certainly agree in what the author has said about the diagnosis of cancer of the breast. Very frequently we cannot tell exactly whether or not a growth is malignant until a microscopic examination is made. Even with a microscopical examination the question may not be entirely settled. When you make a microscopical examination you get more data upon which to work, and that is a thing of manifest consideration in such a grave question as malignancy of the breast. There are many cases of cancer of the breast—which simulate an innocent growth clinically. Many cases of innocent tumor of the breast simulate cancer very closely. Then, even in malignant disease of the breast, there is a great deal of difference in the degree of malignancy. Five years ago Dr. Brown had a very interesting case which I had an opportunity of examining. A lady, in looking at herself in the glass, after having taken a bath, noticed that there was a tumor on the upper segment of each breast—a double tumor—and she went immediately to Dr. Brown, who excised both mammæ. I examined the case and thought at the time that we had to deal with colloid cancer of the breast, which is of course malignant, but it has the reputation of being less malignant than any other cancer of the breast. I gave an exceedingly bad prognosis, because of the double tumor and the implication of both breasts. I had occasion to exhibit the specimens to the class many times after that, and in many instances I exhibited them as colloid cancer. Each time, though, I was dissatisfied with my own diagnosis. I ran across, in Alviran's book of tumors of the bladder, a description of a kind of sarcoma which contains a connective tissue of ingrowths into alveoli. These alveoli look very much like the alveoli of epithelioma. On going carefully over the case again I came to the conclusion that this was what we had to deal with: a sarcoma and not a cancer. The case went along without any relapse until a few months ago, and she died a few days since. Now, I made a mistake in diagnosis there, but it is a mistake that I am sure has been made by some of the most eminent pathologists in the world. I am sure that in the so-called benign character of colloid cancer of the breast, the favorable prognosis in those cases, is due to their not being colloid cancer at all, but to their being this form of sarcoma, with these bright spaces in the alveoli. The case is just simply to illustrate the difference of prognosis between cases that are malignant. If you take cases of fibroid of the breast, there is a vast difference between the malignancy there and the malignancy in cancer. Very many of the former never come back again; some of them do return and are called recurrent fibroids. They are equivalent to colloids of the skin, and to those fibromata of the ear occurring after perforation for ear-rings. The malignancy of those fibromata of the ear is simply the malignancy of the colloid. It recurs again after being cut off. A very good instance of that occurred in the practice of Dr. Chismore. A lady had a fibroma of the right lobe of the ear, occurring after perforation for an ear-ring, and it recurred three times after extirpation. The malignancy in this case, however, is very different from the malignancy in cancer. Malignancy of cancer means metastasis as well as recurrence *in loco*, while these colloids usually are malignant only *in loco*. I was interested in another case with Dr. Mayer, which presented every appearance of an innocent tumor. It was hard and circumscribed, and easily movable. The skin was easily moved over it, and it was easily movable on the subjacent tissues. There was a slight history of pain, and there was one nodule on the tumor. The tumor was about the size of a walnut. It was taken out, and the most of the tumor was found to be adenoma, but there was a place on the tumor that had already taken on cancerous degeneration. It had infiltrated, and eventually would have developed clinically into a cancer in a very short time. I think the early extirpation in this case will obviate any further trouble. Of that we cannot be sure. We cannot be sure in any of those cases when there is malignancy there that we can get ahead of the infiltration. You cannot see malignancy; you can only say that if certain cells are in a certain position, or have certain characters, that the tumor is probably malignant. The case of Dr. Chismore is very interesting with regard to our getting ahead of the malignancy *in loco*, but not being able to head off the malignancy by metastasis. A year ago Dr. Chismore sent me a case of cancer of the penis. The man had a peculiar anatomical arrangement of the penis. The internal surface of the mucous membrane of the prepuce sprang directly from the corona. That made a bad joint; that joint was always breaking. It always had given him trouble. He got a chancre. The chancre left a cicatrix. The cicatrix accentuated the bad joint. A growth appeared on that after a few years, that was button-shaped; tapering in the center. This growth was epithelioma. I cut a piece out of it in making the diagnosis. It sprang across the preputial space, and infected the inner surface of the prepuce. The doctor cut out everything in sight. It occurred again on the side of the body of the penis; he cut that out. The glands in both groins were affected, and after a time these were extirpated. It never recurred locally, in the location of first implication, but it implicated one gland after the other until the patient died a few days ago, with a tremendous cauliflower excrescence on the left groin.

Committee on Medical Education and Medical Legislation.—The report of this committee was read by the Chairman, THOS. ROSS, of Sacramento. He said: Generally speaking, the standard of medical education in this country was never before so high as it is to-day. The facilities for instruction were more complete, the teaching more thorough, and greater improvements are promised in the near future. A practical result of medical education in all civilized communities was the recognition of the importance of enacting and enforcing strict quarantine laws. Boards of Supervisors have also been compelled by legislation to appoint local health officers endowed with full sanitary authority. This he regarded as an example of the medical education of a community. Regarding purely medical legislation, he believed it was useless to attempt further enactments until the people had been educated up to their necessity. He advocated the writing by health officers of short articles for publication in the daily papers. These articles should be plain and free from technicalities, upon such subjects as contagiousness of tuberculosis, the pollution of water supplies, the protective influence of vaccination. The people are very ignorant in these matters, and the best medium through which to inform them and by which to mould public opinion is the press. The great defects in our system of medical education were in many instances the lack of requirements in preliminary education, sufficient hospital facilities, too short duration of actual study and laxity in the final examinations. These defects were being gradually remedied and the requirements for a diploma had been advanced from two to three years, and in many cases even to four. A marked evidence of this advancement was the tendency in many States to complete separation of the medical teacher from the medical examiner. There is no doubt there are too many medical colleges in this country. Great Britain and Germany have one medical college to every 2,000,000 inhabitants; France, one to every 6,500,000, and the United States, one to every 500,000. The principle obstacle in the way of a general high standard of medical education is the great number of medical colleges. In the absence of a uniform standard of literary and medical qualifications by the colleges, the only hope lay in the creation of State Examining Boards, such as are in operation in sixteen States. There were too many institutions assuming the name of colleges that more properly should be designated diploma mills. It had recently been stated that Ohio had fifteen of these institutions, and Missouri fourteen. Ohio, therefore, is entitled to wear the "yellow jacket" and the "three-eyed peacock feather" for being the State in the union most prolific in medical diploma manufacturing institutions, with Missouri a close second. In order to elevate the standard of professional conduct the speaker recommended that it be made the duty of a professor in each of the medical colleges to instruct the students in medical ethics, so that they may be early imbued with a deep sense of professional honor.

DR. HENRY GIBBONS, of San Francisco, in opening the discussion, said: Dr. Ross has presented a most instructive paper, and one which illustrates a very gratifying increase in the matter of medical education in the last few years. It will be noticed that this increase has been mainly in the last fifteen or twenty years. Those who have looked back upon the subject will bear in mind that perhaps in the large majority of cases in the last century one course of lectures, and that of four months, was required. At present four years is the time required, and we increase the number of months in the term to five and six, and in some schools to eight and nine. This should be very gratifying. I have often noticed the fact of the relegation of old books to innocuous desuetude, and it has been a source of some sadness to me to think that some of the old masters should be lost sight of, and it would continue to be a cause of sadness if it were not indicative of the rapid advance in medical matters. Who now consults Meigs, or Ramsbottom, or Bedford, in obstetrics? Who even consults the classical Watson? When I commenced the study of medicine his was almost the only work on practice of medicine. Within the period of a few years some great admirer of Watson published an epitome of his work, which he often reads or refers to. Other works have rapidly superseded these once classical and admired writings. Dr. Ross states that a large number of colleges will adopt the four-years' course within a few years. It seems to me that before 1896 the number will be much larger than he anticipates. The Association of Medical Colleges, which consists of 80, adopted the rule that four years should be considered the minimum of requirement, I think to take effect in 1896, or not later than 1897. This does not include the irregular, or at any rate homeopathic colleges and eclectic colleges. All colleges are rapidly coming to the plan of having four-year courses. I do not see, however, how the number of colleges is to be limited. I regret very much that there is not some means of limiting the number of colleges which are being established and which are in existence. I would favor the establishment of a board for examination, which should have the sole privilege of admitting to practice. I would like to call the attention of the Society to one illustration of the beneficial effects of quarantine which has been referred to by Dr. Ross. Prior to twenty years ago small-pox was constantly found in this city, and occasionally it became epidemic, destroying quite a large number of lives, and infecting a much larger number. But quarantine has been the means of preventing the occurrence of any epidemics in this city for twenty years. Occasional cases have crept in through inadvertence. This shows the beneficial effects of quarantine, where steamers are constantly coming in from ports that are infected, or where small-pox is to be found. I like the suggestion made by Dr. Ross, that officers should be elected for the purpose of regularly making reports to the public press. I have noticed that there is a column in the *Youth's Companion*, which comes to my house, to my children, in which some medical topic is discussed every week--some public medical matter, and it struck me as certainly a very wise procedure. Something of the kind might be instituted with regard to the daily press, and some officer detailed to see that it was carried out.

DR. D. W. MONTGOMERY, of San Francisco: I have had some experience with the Ontario act. I know that it works excellently. I have forgotten now how many years it is since a homeopath has graduated in the schools of Ontario. Almost all the homeopaths in Ontario, and there are very few of them, are from this side of the line. They are almost exclusively in the large cities. Of course that obtains there too, but there the fewness in number is very marked. One of the good things in the act, to my mind, was in stating clearly to the public that all medical men had to pass the same anatomical examination. Any lawyer, or any layman, or any person away from medicine altogether knows that anatomy must be the same. The same thing holds for physiology and for chemistry, and right clear through until it comes to medicine. If we would put that before our legislators I am very sure we would have a good chance of getting a law through. Then after the law is passed there is still a danger ahead, and that danger is now working in Ontario; the very small fee that is required of each medical man. I attended the Ontario Medical Association last year, and it was wonderful to hear the growling about the very small fee that the Council required to keep it up. They seemed to forget the vast benefits they got from the working of the law. It is an excellent thing there, and would work well in this State.

DR. GIBBONS, of San Francisco: I would like to endorse Dr. Ross' position, that a lecture or lectures on ethics should be given by some member of the faculty in all the colleges. I think it is a very important matter that students should be instructed in this direction. I don't know whether it is specifically done in the school that I represent, but I recognize the fact that it is a very wise provision, and should be endorsed.

Castration for the Relief of Hypertrophy of the Prostate.—C. L. BARD, of Ventura, read this paper. He said: The investigations of Hunter, Owen and others to ascertain the physiological use of the prostate gland have definitely determined that it is a sexual organ, functionally in no way connected with the urinary apparatus. This is shown by its embryological development, its absence in the female, and its participation in any condition affecting the sexual apparatus. It has been plainly demonstrated that castration performed upon a young animal arrests the development of the prostate. The intimate connection between the testes and the prostate is evidenced by the undeveloped state of the latter prior to puberty and the atrophy of both accompanying old age. It was also a well-established fact that eunuchs did not suffer from hypertrophy of the prostate. Furthermore, it has been demonstrated that removal of one testicle is followed by atrophy of the corresponding prostatic lobe. The cause of these phenomena was as little understood as the relation between the parotid gland and the testes. The marked similarity between prostatic enlargement and uterine fibromata had also been pointed out. It should, however, be mentioned that Moullin, recognized as one of the best authorities on the prostate, denies this analogy. To Prof. White, of the University of Pennsylvania, is due the credit of suggesting that as removal of the ovaries usually results in the decrease and often the disappearance of uterine growths, so castration in man might be followed by atrophy of an enlarged prostate gland. After considerable experimenting, he published his opinion, in 1893, since when over twenty operations by different operators have been recorded with results that have been most satisfactory and sometimes absolutely marvellous. As one-fourth of the recorded cases have occurred in California, the speaker said it was exceedingly appropriate that this subject should receive the attention of this Society. He then reported a case in his own practice in which marked enlargement was followed by the usual train of symptoms. This case had suffered for several years under every quack treatment, including Hammond's spermine and cerebrine. Double castration was followed by prompt amelioration of the distressing symptoms. No other affection contributes so much to the discomfort of man in his declining years as prostatic hypertrophy. The acceptance of this novel operation demands a full consideration of the other effects of castration on man. Prior to puberty, it causes effeminancy and a tendency to obesity. The growth of the beard is arrested. The larynx does not develop and the voice is puerile. It would seem that no unusual mental change follows castration when performed on the very young, the unimpaired intellectual powers of eunuchs being shown by numerous examples in history. After puberty and in middle life no physical effects occur after castration and the mental vigor is not in any way impaired. Thus, Abelard was one of the most famous logicians and theologians that France ever produced, and Origen was the most distinguished theologian of the ancient church. While the question of unsexing was debatable, castration for the relief of hypertrophied prostate was only proposed when man's sexual life was in decline or completely ended. In fact, at that age when we can expect no resulting effects, physical or mental, as contra-indications to its performance. Under antiseptic precautions, it is easily and safely performed, and while, for sentimental reasons, castration may never become popular, as Prof. White has said, there will be no lack of cases willing to submit to an almost painless and safe operation, followed by no such unpleasant conditions as those accompanying prostatic enlargement.

Dr. O. J. Mayer, of San Francisco: It was very properly remarked that the operation does not promise to become very popular, although castration, when done for hypertrophy of the prostate gland, when the sexual inclination is on the decline, is at a time when a man rather inclines to the best relief promised. A short time ago a man had to undergo castration on account of several unsuccessful operations for a plastic operation to restore his scrotum; he suffered so much that he finally was willing to undergo the operation of castration. That was two years and a half ago. I was not there, but I know the man personally, and he now suffers from a disease which may be very properly classified in the category of psycopathia sexualis. He has no testicles, still it seems that the inclination for intercourse is still within him, and he tries to satisfy his imaginary passions in some way. I think there is great scope for reflection whether to subject a man to castration for hypertrophy of the prostate gland. I think if we paid more attention to and tried to perfect the *technique* of prostatectomy we can avoid such a mutilating operation as castration.

Dr. G. W. Davis, of San Francisco: This is certainly a question of considerable importance, because it is a common affection. I do not doubt that if it were not for the sentimentality connected with it, it would be performed more often. I have had for the last two or three years considerable experience with hypertrophy of the prostate and other affections of it. I have, not more than a block from here, a gentleman now in his 84th year, who is suffering from trouble due to that condition. Some three months ago, when I saw him, it was exceedingly difficult to introduce a catheter. The gland was exceedingly hard and evidently very decided in its condition. I used, first, a suppository of iodine, and later suppositories of tallow and iodoform, together with gradual dilatation by steel sounds, and in a few weeks we had a decided improvement in his condition. A gentleman of that age has no sexual propensities, and he has had none for the last eight or ten years, to his knowledge, and in those cases would castration be of any benefit. If castration, as I understand, is for the purpose of lessening or annihilating the sexual desire, would it be any benefit in a man of his age, or where the desire had been lost? I am rather inclined to the opinion that it would not be of any benefit in that case. Another point that I want to make is the medico-legal aspect of this thing. Fifty-four years is the age stated by the author of the paper in which a certain percentage of this hypertrophy occurs. In many cases the desire is not lost until 65 or 70, or perhaps more. I do not care if you get the consent of the patient to perform this operation, after the operation it is quite possible, if not probable, that a suit for damages for malpractice may be instituted, even after the consent of the patient has been gained, and therefore, I think it would be well for anyone who may undertake to make this operation to have that thing thoroughly understood.

Dr. T. W. Huntington, of Sacramento: This is a subject that we could well afford to spend a moment on, as it is one of the coming operations, unquestionably, and it is an operation which promises very much for a class of people who are and have been sufferers for a long time. My instruction upon this subject, and I have looked the matter up somewhat carefully during the past three months, is to the effect that the operation is specially adapted to a class of patients who find it necessary to earn their living—laboring men, whose families depend upon them for their daily bread. To subject these patients to the kind of treatment suggested by the last speaker for the amelioration of their symptoms is practically out of the qnestion. They and their families would starve to death meanwhile. To those patients we can offer from two to four weeks' confinement and a return to their ordinary calling. I feel that in that class of cases particularly, this is a subject which we can take up and discuss with some probability of rendering them a service. With regard to the medico-legal aspect of the subject, I realize fully that there may be a danger. I realize perhaps more fully than most of you the annoyance that may occur from a thing of this kind, and after having had some experience of it, I am fully prepared to say that I, personally, will take the responsibility. I do not think to render such a service as this to a person ordinarily well disposed will incur for the operator sufficient risk that he may not go ahead and adopt the procedure. I stand ready to adopt the method at any time. I wish to add a very interesting matter that was called to my attention in this connection. Dr. Robert F. Weir, of New York, has devised a method of replacing the testes by a celluloid article, and he has a patient now who has worn one or two of them for the past two years without any discomfort and for certain reasons. That is a thing that is, perhaps, worthy of consideration. I saw the articles used by Dr. Weir.

Committee on Medical and Surgical Diseases of Children.—In the absence of the chairman of this committee, ELIZABETH S. MEADE, of San José, a paper on "Modern Ideas on Infant Feeding," was read by the Secretary. The author said the problem of infant feeding had in the last few years made important and rapid progress. In searching for a substitute for human milk we naturally turn to cow's milk. There is a marked chemical difference between these milks, and to make the substitution practicable there is need for a modification of the cow's milk, and it is this that the milk laboratories of to-day are seeking to accomplish. Dr. T. M. Rotch, of Boston, lays down the following principles regarding modified milk.' It should be: "(*a*) free from foreign matter; (*b*) but a few hours old; (*c*) practically sterile; (*d*) neutral or faintly alkaline; (*e*) warmed to 100° F. before feeding." The separator, milk and cream, provide for the first requirement. A dairy near at hand meets the second. Pasteurization, or exposure of the milk for 20 minutes to a temperature of 155° to 165° F. fulfills the third. It has been proven that all the more common pathogenic bacteria are destroyed or rendered inert for 24 to 36 hours at this temperature. It also possesses many advantages over milk sterilized at 212° F. It is more digestible, the casein being more easily acted upon by pepsin and pancreatin. The starch liquefying ferment is not destroyed, and the alteration of the milk sugar is not so great. Rotch says: "Certain separate elements are needed for the combinations required in modifying cow's milk: (*a*) Cream which contains the fat required; (*b*) milk deprived of its fat; (*c*) solution of milk sugar; (*d*) distilled water." That the modification may be done exactly there should be a dairy under the control of a laboratory, and the laboratory should be in the hands of competent persons. Yet, without this ideal, the results obtained by approximately following these ideas have been very gratifying. Given Dr. Rotch's working basis, which is the normal average of the constituents of human milk, and with a knowledge of the requirements of the infant as a rule, the success attending such feeding is all that can be desired. That even very young children possess idiosyncrasies, and that these must be studied closely by the physician cannot be gainsaid. The author then said that a milk laboratory in connection with the Children's Hospital, San Francisco, had been established some two years ago. The methods of treating milk, and its modification for each child, were then mentioned, with the various details necessitated by individual peculiarity. In conclusion, the author said it is impossible in the vast majority of cases to make these changes, or even to prepare milk in a private family to the satisfaction of all concerned. There is a demand for a means by which this need can be met, and it is by a milk laboratory properly equipped and managed that the problem can be most satisfactorily solved.

DR. L. M. F. WANZER, of San Francisco, in opening the discussion, said: No period of life is more important than infancy. Nothing constitutes so great a source of sickness and death as unwise feeding. We all agree that no food can adequately replace the mother's milk during the first period of infancy. If by accident or death the child is deprived of the food intended for it by nature we must supply a substitute. The paper just read gives valuable suggestions as to what we should supply, in regard to sterilized milk, and it is unfortunate that the use of this food cannot become more general. In San Francisco, connected with the Children's Hospital, we have a laboratory, but the finances of the institution are in such a condition that we are unable to prepare the milk as we would desire, the result being that but few can be fed as we would wish them to be fed. Among the poor the milk is apt to fall short of the infant's needs. How long shall we feed the baby? How much nourishment? and how long at the mother's breast? are questions which we are called upon to answer. The healthy infant seeks the breast with avidity, but sucks little at a time, thus leaving an interval for thoroughly digesting the little which it has swallowed. If deprived of the breast the same rule should apply to the use of the bottle.

We try to teach that there ought to be a fixed time, say an interval of one or two hours, for giving nourishment. I believe the stomach cannot thus be satisfied. Digestion may be slow in one child and the interval consequently too short. In another it may be quick and the interval too long. The crying and sighing, which can never be mistaken, is the active call of the infant. It is held that overfeeding is responsible for many of the troubles of early infancy. Perhaps if we look at the quality and quantity of food we shall not find so much fault with over-feeding. In regard to the amount, I believe it has been determined that at the breast 36 ounces is the smallest quantity that will suffice for the daily nourishment of a healthy infant of one month; but I think in feeding we must often double that amount.

Dr. W. F. Cheney, of San Francisco: This is a subject that is of particular interest to me. I think it very unfortunate that so small an audience should be present to have heard this valuable paper. Any man in general practice seems to feel it his privilege to take care of an infant from the day that it is born until it is able to take care of itself. He does not hesitate to regulate its diet, and yet I venture to say the ideas expressed here to-day are not generally known to the medical profession. The advances that have been made in the last few years in this subject are of vital importance, but unfortunately they do not attract the same attention as does the subject of excision of the rectum or resection of the hip, which will bring out a large attendance here. The point to be borne in mind first of all in regard to infant feeding is the quality of the food. It is a source of wonder to me how so many infants manage to survive at all with the food that is given them by their mothers, with the very best intentions. There is a vast amount of ignorance on this subject among mothers, and the only way these mothers can be instructed is through the medical profession, and if the medical profession will not attempt to receive that instruction, then what is to become of the infant? The quality of the food, if it must be artificial, should be as near as possible like the mother's milk, unless he is familiar with the analysis of human milk, and yet this knowledge is not generally disseminated as it should be. After it is disseminated, the difficulties are very great in the way of making an artificial food like that of the mother. We are fortunate in this city in having a milk laboratory. I wish to speak a good word for that laboratory. It has been of great service to me in furnishing infants with the food that I felt it was proper for them to have. In the way of the artificial preparation of food there are a great many obstacles in the family, especially in poor families. They will not go to the trouble of preparing the formula we wish them to have. These formulæ can be furnished at the laboratory to the family at a minimum cost, and I am sure a number of lives have been saved since this laboratory was started. The laboratory is not perfect yet, as has been said, because of lack of funds. It is desirable that there should be a laboratory where food can be prepared of varying constituents, just as a prescription is sent to a drug store to be filled by the druggist. In the large hospitals in the east, in Philadelphia and New York, I am told that prescriptions are written for infant food exactly as we write prescriptions here for the druggist to fill.

Dr. Adelaide Brown, of San Francisco, spoke of milk supplied by the Gordon Laboratory in Boston, at a rate of 10 cents a day to poorer children, and 50 cents a day to children of the wealthier classes, no matter what the strength of the milk. One great advantage of the use of this milk was that you could be quite sure the bottle in which it was supplied was perfectly clean, and that good milk was furnished. The proportion of the ingredients can be absolutely controlled by the physician, and every formula has to be marked in the same way. The Gordon Laboratory furnishes a certain set of prescription blanks, and the doctor can write the age and weight of the child and its general condition, and the number of feedings wished for it to have during the day, and send that to the laboratory with his signature, and they will furnish the normal feeding for that child. The milk comes at the same time every day, from 8 to 12 bottles, according to the age of the child. In using this milk I think the physician should be the one to control the increase in quantity of the feedings and the lengthening of the intervals between them, and the increase of the various ingredients, and the increase in the amount of the whole mixture. It seems to me it is hardly fair to leave that to the laboratory.

AFTERNOON SESSION.

Committee on Ophthalmology and Otology.—The report of this committee was read by the Chairman, H. BERT ELLIS, of Los Angeles, the subject being "Symptoms and Treatment of Insufficiencies of the Orbital Muscles." The term asthenopia, according to its derivation, means weak power of sight, but Donders describes it as a peculiar condition consisting of more or less inability to use the eyes continuously for close work without the occurrence of one or more of the following symptoms: Fatigue of the eyes, blurring, blepharospasm, lachrymation, photophobia, nausea, and even vomiting and vertigo. To these should be added headache, either frontal, temporal, occipital, or general. There is not necessarily any organic disease of the eyes, and the cause is usually to be found in an error of refraction, generally hypermetropia, or astigmatism. Irritation of the nasal mucous membrane, hyperesthesia, and irritability of the retina and inherent weakness of the extrinsic muscles of the eyes will also produce the same symptoms. It was not necessary to make a distinction as to the origin of the disease. In every case of asthenopia the first point was to measure the refraction and test the eye muscles. If both are at fault, the refraction should be corrected before treating the insufficiency, and very frequently, unless the insufficiency amounts to more than 2 per cent. correction of the error of refraction will relieve the asthenopia. Too frequently, however, the question of muscular balance is not taken into account, a mistake that was at the bottom of the great majority of unsatisfactory refraction cases. The speaker then reviewed the various muscular conditions that may exist in cases of insufficiency. The objective symptoms must be depended upon for the positive diagnosis of muscular errors, the refractive error having first been corrected. He then described the method for testing the muscular conditions, using Gould's prism battery for this purpose. Having found the insufficiency, what shall be done with it? The speaker quoted a number of authorities, including Roosa, Fuchs, Berry, Noyes, Stephens, Michel, Savage, and Gould, in relation to the proper procedure in these cases. Roosa says: "If the student will carefully correct the errors of refraction, he will have no need for tenotomics except for strabismus, nor for prisms except for paresis or paralysis of the external muscles." Gould believes that every case of exophoria, and possibly of developed strabismus, is certainly and quickly curable by a rational and common method of ocular gymnastics, and absolutely without operation. His method is to carry the loaded stimulus of convergence slowly beyond near range vision—that is, from punctum proximum to punctum remotum, and by repetitive gymnastics fixing it there. Most of the lines of treatment mentioned in the more prominent text-books proceed on the supposition that the error lies in a deficiency of power of certain pairs of individual muscles. Gould controverts this idea, and bases his treatment on the theory that, in the vast majority of cases, the seat of the difficulty is purely, at least primarily, and always principally central and innervational. In conclusion, the speaker said he had not written an exhaustive paper, either as to the diagnosis or treatment of muscular asthenopia, because long papers are not appreciated, and because the practical points are what the practitioner desires. He had had some experience with all these lines of treatment, and had not been perfectly satisfied with any of them. In looking over his case book, he believed he had had best results in exophoria by Dr. Gould's methods.

DR. W. F. SOUTHARD, of San Francisco, in opening the discussion, said: In this very interesting paper Dr. Ellis has given us a clear and comprehensive review of the action of prisms and the method of procedure necessary to produce the effect desired. It can be truly said, I think, that this subject forms one of the most interesting chapters in the study of refraction and accommodation. It is of special interest to the ophthalmologist, since it is his province to deal with the various methods for giving relief to those who have disturbances due to muscular insufficiencies. It is taken for granted that the general practitioner, to whom these remarks are addressed, has not familiarized himself with the subject of muscular insufficiency and its disturbances. For this reason I shall try to make my remarks as clearly understood as possible. The aim of the orbital muscles is to so work in harmony that each eye shall be directed at the same moment to the object looked upon, with the least disturbance of their balance. The purpose is to produce at the visual center the idea of a single stereoscopic image. If by any reason the muscular balance be interfered with, such as loss of innervation of one or more associated muscles, a greater or lesser strain may be thrown upon the coördinating power, which acts to preserve a single image. A tendency may be ever present inclining to the separation of these images, but as long as actual diplopia is not produced there must be an ever present watchfulness at the visual center to avert doubling of the images. This action is purely automatic as far as the consciousness of the individual is concerned, but the effects of strain upon the nervous system is none the less serious. If the muscles of the eye-balls had no more work to do than keeping the eyes parallel, so that the images of distant objects be correctly focused upon like portions of the retina, there would not be so much complaint of muscular insufficiency. We desire, however, to see objects which lie nearer to us than what is termed the far point, the point from which rays are considered as parallel; hence a new element enters into the mechanism of seeing. Up to this point we have looked upon the two eyes as a single eye set in the middle of the forehead, the two eyes moving in all directions, up, down and from side to side, as a single eye, in conformity to Hering's well-proved theory of associated movements of the eye-balls. When we come to look upon objects inside of the far point two new factors are brought into action, viz: accommodation and convergence, and this action is governed by an innervation of its own. If it were not for this innervation "we would see all near objects double, from inability to converge the visual axis upon them." It is at once perceived that although the proposition that the two eyes should be focused upon the same subject at the same time to see distinctly is simple enough, it must be conceded that it is in reality a matter of some complication. Accommodation, which is simply a focusing ot an object, is not attended with any movement of the eye-ball if the opposite eye be covered; it is when we look with both eyes that the action of convergence is brought into plan. As the object is brought nearer to the eye, and the focus or accommodation changes, the two eyes tend to approach each other so that the visual axes may constantly meet upon the object looked at. It is then easy to understand that there must be an intimate connection between accomodation and convergence, and that there is a certain rate of action between the two which must be maintained for any point within twenty feet. Another interesting fact is that at the far point, that is, twenty feet beyond, when accommodation is supposed to be at its minimum, or state of rest, there is still convergence. In other words, the old notion cannot be longer maintained that when there is the least amount of convergence the eyes are parallel and adjusted for distant vision; that is, for parallel rays; the truth being that from the time we open our eyes in the morning until we close them in sleep at night there is convergence, and in hyperopia and hyperopic astigmatism there is accommotion also; in a word, the minimum of convergence is not parallelism, but divergence. This has been proved in several ways. If the eye-lids of a person under an anesthetic be raised the eye-balls will be seen to be rotated upwards and outwards. In sleep and after death the same position of the eyes may be found present. Dr. Joseph Le Conte found the same thing to take place in drowsiness in his own case. In drunkenness we may also observe the same condition. This demonstrates the fact that there is an initial convergence which brings the eyes from this relaxed or divergent position to one of parallelism. To keep this parallelism for distant objects, then, there must be a constant state of innervation of the ocular muscles to prevent the eyes from seeing double. This work is accomplished by latent action of the internal recti muscles. When we converge the eyes for a nearer point this action becomes positive and evident to the observer. If the same nerve impulse is conveyed to any associated pair of muscles, brought into action at any moment, as for example the internal recti of each eye, then binocular vision may be maintained without conscious effort. Since, however, the result aimed at is always to preserve binocular vision, loss of innervation of one muscle may result in preservation of binocular vision, only at great cost to the coördinating apparatus. In the use of the eyes at the near point. as for example by students, bookkeepers, artists and the like, great disturbance of the nervous system, such as headaches, dizziness, blurring of the vision, etc., may follow from this overstrain. As a rule, there is present some error of refraction, but not always in these cases of imbalance of the ocular muscles. If there is an error of refraction it may cause such a difference in the size and shape of the images upon the retina that eye strain will follow from the constant action of the ciliary or accommodation muscles acting together with an unequal power of the ocular or convergent muscles. To show whether or not there is a weakening of the innervation of one or more muscles, a prism of 5 to 7 degrees, base up or down is placed before one eye. The uncovered eye will now see the true image of the object, while the covered eye by the prism will see a false image above or below the first, according as the prism is placed, edge up or down. Since it is hopeless for the visual centers to cause fusion of the two images thus doubled, we can easily discover the amount of latent deviation which has been overcome by the constant desire to fuse two images into one. If we find when looking at a candle at 20 feet distant the false image to be to the right or left of the true image we are able to tell the amount of latent deviation. We may have latent divergence, though no error of refraction exists. There are those who hold that this loss of convergent power is always due to errors of refraction; that when the error is corrected the muscular balance will return. This is true in many, perhaps a majority, of cases, which could be easily explained had we the time. There are, however, a very large number of persons who, though having very slight, if any, error of refraction are painfully deficient in convergent innervation. I am willing to go further and say that under certain circumstances from excessive work at the near point, an emmetrope may be as great or even a greater sufferer from lack of muscular balance than a person having a fairly high degree of refractive error. If the balance between the internal and the external recti muscles is about six or seven to one there is not much doubt of their ability to fuse images at all distances when visual acuteness is normal in both eyes. The moment an image is weakened that eye tends to deviate. If you cover one eye with a red glass and two candles are seen, there is no doubt of muscular imbalance. These cases occur not infrequently, and they are just those that give us the greatest amount of trouble to restore to usefulness; and it is also in just such cases that we get our happiest results when a judicious use of the prism has been made. This leads us to this point, that, having corrected an error of refraction, we cannot always send a patient off with the words: "Now you will have no more trouble with your eyes, for you see perfectly well with each eye." We must not rest satisfied until we have tested the muscular balance of the eyes and learned their power of maintaining a single image at any point. Such cases as the following not only demonstrate to us what disturbances may take place when the muscles are out of balance, but the gratification of the patient when the results are satisfactory. A professional gentleman, with an error of refraction of ¼° came to me with a history of headaches of a severe type, insomnia, weakening of memory, in fact, a state of almost nervous prostration. He wore dark glasses, for light was painful to him. Print constantly blurred and eyes were frequently red after use at the near point. I found in testing with the candle at twenty feet that when one eye was covered with the red glass the images at once separated and he could not bring them together, the covered eye at once diverged. Maddox rod test and prism, base up, gave similar results. Almost immediately on using homatropine his head and eyes felt better. It was with great difficulty that I could break up the spasm of accommodation. His refraction is slightly hypermetropic, yet before being put under the mydriatic he accepted a concave lens. The final result of using prisms having regular orthopedic exercise three times daily was most happy. The patient found very soon that by use of prisms just before retiring he could get a better night's sleep than when he neglected this exercise. This question of muscular innervation and its correction, or rather its strengthening by the use of prisms, is well worth the study given to it. So much depends upon a right interpretation of the symptoms accompanying muscular weakness of the eyes, and the correct application of the means at hand for remedying the defect that we may well be pardoned when we say that there is a great deal more in the subject of refraction and accommodation than the mere putting of glasses before the patient's eyes to procure visual acuteness. In conclusion, I would say that though this may seem a somewhat complicated subject, there is one plain fact, namely: That when a patient comes to us with disturbances of vision we must not rest satisfied with correcting the error of refraction and giving normal acuteness of vision, but we must see to it that binocular vision is preserved at the least possible expenditure of nerve force of the coördinating apparatus.

The Relation of Errors of Refraction to the So-called Reflex Manifestations.—WM. ELLERY BRIGGS, of Sacramento, read a paper on this subject. He said: It is admitted by all men of experience in treating eye troubles, that refractive errors cause a variety of reflex symptoms. Among these reflex manifestations he mentioned asthenopic symptoms, which vary in degree from a tired or uncomfortable sensation in or about the eyes after use for close work, to severe pains in the various parts of the head, vertigo, nausea, etc. Recently a number of cases of epilepsy have been reported, in which correction of the muscular imbalance and errors of refraction produced great improvement in nearly all cases. The evidence is too meager to form conclusions in regard to the amount of influence refractive errors may have on epilepsy. The speaker pointed out that most American oculists place much greater importance upon the slight refractive errors than do European oculists. He believed this disparity could be partially explained by the neurotic tendency of the American people, which makes them more susceptible to slight refractive errors or muscular imbalance. He formulated the following conclusions: (1) Patients who are troubled with persistent headaches from some unknown cause, and whose condition is not relieved by moderate rest and improvement of the constitution, should have their eyes examined with reference to some ocular cause of the trouble. (2) Generally some refractive error will be found, which glasses will correct, and relieve the head symptoms. (3) Paralysis of accommodation is usually not necessary, as correction of the manifest error is generally sufficient. (4) In cases in which correction of the manifest error does not relieve the head symptoms, or in which there is a tendency to strabismus, atropine should be instilled, and correction of the latent error be made. (5) Epileptics, whose attacks are not due to some known pathological condition, should have their eyes examined in reference to any ocular strain. (6) Opticians, as a rule, are not competent to examine eyes for glasses, and traveling spectacle venders are usually both ignorant and dishonest. (7) Oculists sometimes prescribe glasses for too slight causes. (8) The general practitioner too often treats persistent headaches by internal medication, which can be cured only by correction of some refractive error by glasses.

Scrofulous Inflammation of the Eyes in Children.—KASPAR PISCHL, of San Francisco, read a paper on scrofulous disease of children's eyes, in which he described the appearance of the child as it is generally presented to the doctor. The little, poorly-nourished child, dressed poorly in damp clothes, buries its face in its mother's dress, covering the eyes with its hands when brought for inspection. The child looks pale, thin, or bloated and flabby. The evidences of scrofula are seen in the eczema of the nares, swollen upper lip and nose, impaired nasal breathing, swollen glands in neck and below the lower jaw. The lids are swollen and spasmodically closed, the eyes water and are painful. The lashes are matted together with crusts, and the edges of the lids somewhat ulcerated; the external commisure is excoriated. Examination of the eye is difficult, but can be facilitated by dropping a little cocaine solution into the eye. The conjunctiva will be found injected, nodule-phlyctenulæ are seen, or, in severe cases, the cornea is encircled with small nodules, partly confluent to small ulcers. In case it is difficult to decide whether the cornea is ulcerated, a drop of the following solution will make the epithelial loss evident: Fluorescin gr. v, natrium carb. gr. vij, aq. destil. ℥ss. The corneal ulceration may cause perforation. The prognosis of scrofulous inflammation is usually favorable, as it rarely produces blindness, but more commonly some visual impairment. Our efforts must be directed toward a betterment of the hygienic surroundings, improvement in diet, frequent bathings, etc., to cure the eye trouble and prevent recurrence. Calomel locally has been held to be a specific. Dermatol has been recommended recently. Hot fomentations applied for half an hour three times a day often do well. Warm bichloride solution applied to excoriated lids often acts beneficially. The application of the galvano-cautery is dangerous in these cases. The ulcer may sometimes be scraped with good results. As soon as the inflammation has passed away the following ointment can be used: Hydrarg. oxidi flavi gm. 0.6, lanolin gm. 15.0, olei amygdalarum d. gm. 4.0. Attention should be paid to any disease of the nasal cavity.

Ocular Lesions Associated with Constitutional States.—H. I. JONES, of San Francisco, presented a paper on the relationship between constitutional diseases and ocular lesions. He said: The eye is not a separate autonomous organ, living, as it were, a life apart, nor is it a mere appendage or accessory, convenient and advantageous to the rest of the organism; on the contrary, it is in the closest relationship with the rest of the body and an integral and delicate part of the nervous system. Strumous ophthalmia, keratitis, iritis and choroiditis, which occur in syphilis, and retinitis from renal disease, are familiar examples of ocular troubles due to constitutional states. Phlyctenular ophthalmia is considered to be due to scrofula. The child is badly nourished and is surrounded by bad hygienic conditions. The treatment depends more upon the betterment of the hygienic and general condition of the patient than upon specific local treatment. Sweets, pastries, coffee, tea, and starchy foods should be avoided. The eyes are to be bathed with boracic acid solution, yellow oxide of mercury ointment rubbed into the edges of the lids at night, and atropine solution dropped into the eye. Syrup of the iodide of iron should be given internally later. Another cause of eye trouble is dental irritation. Constitutional conditions are often the cause of floating specks and opacities before the eyes. Bright's disease and uterine disease are also causes of eye affections.

Our Children's Eyes.—W. F. SOUTHARD, of San Francisco, read a paper on this subject, in which he pointed out the importance of accurate and clear vision in the development of the child's conception of the external world and in the formation of the youth's mental characteristics. The author believes that some of the mental traits are due to visual anomalies. We should, therefore, study the child's ocular condition early in its life, in order that any anomaly may be corrected and its evil effects obviated. The present system of education demands too great exertion of the rapidly growing child. There are large numbers of children, especially girls, who are entirely unable to endure the severe tax upon their nervous systems, and they are compelled to abandon their studies from a want of proper attention to the eyes. Correction of refractive errors occasionally completely changes the character of the child, by relieving a nervous strain and improving the health of the patient. The method of study also has much to do in producing myopia, which is rapidly on the increase in the whole civilized world. Statistics show: (1) That myopia has markedly increased during the past 20 or 25 years. (2) That the first appearance of myopia is coincident with the child's first year in school. (3) That with each year's progress in school work, myopia exhibits a proportionate increase. (4) That it is primarily due to excessive and prolonged use of the eyes at close range. (5) That it is not congenital, only in so far as all inherited tendencies may be called congenital. Other pathological conditions follow as a result of the myopia. The system of education is directly responsible for the increasing frequency of myopia and its deplorable results. Myopia, hypermetropia, or astigmatism cause many nervous symptoms, often incapacitating the child for the demands of school life. Correction of these errors often relieve the child of various nervous manifestations. In beginning school the child should be required to present a certificate, showing its ocular condition and its ability to pursue a certain course of study.

Magnet Operations, with Cases.—A. BARKAN, of San Francisco, read a lengthy paper on this subject. He said within the past year he had had six cases of magnet operation for the removal of pieces of steel or iron from the interior of the eye. Although the magnet reintroduced in practice by McKeown nearly twenty years ago, is now frequently employed by specialists, Dr. W. E. Briggs, of Sacramento, having some years ago published a series of such cases, yet the general profession was not, he believed, sufficiently familiar with the good results obtained from it. This particularly applied to physicians in the interior, especially in the mining districts. It was very important that physicians in those fields of practice should be properly informed as to the value of the magnet, for it is to them that the sufferer first applies for aid. If there be a correct diagnosis of a foreign body in the injured eye, and if the magnet be promptly and skilfully applied, many an injured eye might be restored to healthy, useful vision. Cases of sympathetic ophthalmia, generally ending in blindness of the other eye, may also be prevented. These reasons, he believed, were justification for presenting the six cases embodied in the paper. The foreign bodies, with one exception, were exhibited, as well as the magnet used in their removal. In all except one case, he found cocaine anesthesia sufficient for the operation. With cocaine there was absolute freedom from the retching and vomiting that was sometimes so distressing when a general anesthetic was employed. His experience agreed with that of Knapp, and also, he believed, with Briggs, that foreign bodies in the vitreous are usually found in the lower part. Knapp has even said that when it is impossible to determine the locality or presence of a foreign body, it is proper to open the capsule of the eye at the outer lower quadrant, and having introduced the point of the magnet, withdraw it. If this be unsuccessful a second and third attempt may be made, and all with perfect safety to the eye. If these efforts fail to remove the foreign body it will be advisable to enucleate at once. While the diagnosis of a foreign body within the eye may, under some conditions, be quite difficult, the operation for its removal may be considered easy and fairly free from risk. The speaker then reported at length six cases: *Case 1*—Was that of a patient 50 years of age who had been struck on the left eye with a small piece of steel, eight weeks previously. The preliminary operation for the extraction of the cataractous lens matter was done, but no foreign body was discovered. The eye was allowed to heal, and after two weeks the magnet was introduced and freely moved about in the vitreous, but without result. Subsequently removal of the eye was urged and consented to. A small piece of steel was found imbedded in the choroid-retinal tissue. During all this time there had been a total absence of pain. *Case 2*—A track-layer, whilst striking a steel drill, received a chip of steel in the eye. An incision was made in the cornea above the wound of injury, and after two unsuccessful attempts the foreign body was removed. *Case 3*—A steel worker was struck in the eye with a small piece of steel; the cornea was was perforated near the center, and the piece of steel was resting on the iris in the anterior chamber. The fragment was removed with the magnet and forceps. *Case 4*—Was that of an employe in the Union Iron Works; a piece of steel having penetrated the cornea. The lower half of the retina was detached. An incision through the sclerotic was made, and the magnet introduced, but without success. Subsequent enucleation showed that the foreign body had passed through the eyeball and had lodged in the orbit. *Case 5*—Was that of a blacksmith who a week previously had been struck on the eye with a hot spark from a piece of iron. He believed that the foreign body had not penetrated. The patient was a man 32 years of age, married, and with a large family; the case being still more distressing from the fact that eight years ago he had lost the sight of his other eye from a similar injury. The lens had began to turn opaque, especially in the central portion. No foreign body was at first recognizable. The case was examined by a colleague, with a similar result, but upon again examining the eye, the speaker was quite positive that a small yellowish-red glistening body passed across the visual field. A deep incision was made into the sclerotic, and the electro-magnet introduced. Two attempts were unsuccessful, but in the third effort a small piece of metal was seen clinging to the end of the magnet. Upon examining him several months afterwards, vision was found to be 15—70. Under date of April 2, 1895, he states that his vision is still improving. *Case 6*—A man 35 years of age, while striking with a chisel, edge ways, received a perforating wound of the cornea, the sight of the eye being immediately lost. After careful examination a piece of steel was detected deep in the vitreous. Under chloroform, an incision was made in the sclerotic, and on the third attempt a small piece of steel was removed. Subsequent examination, after the eye had healed, showed that the cataract was increasing in size, and under date of February 18th, the eye was noted as being free from all irritation, fingers being counted at four feet.

DR. K. PISCHL, of San Francisco: A young man, who had lost his right eye, was brought to me a little while ago, blind. Four days previous he had tried to open a cask of pickles, and a small piece of iron or steel entered his left eye. I saw him four days after the injury; he could not see any objects; he could barely see the light and showed no projection. I could not give him much hope. I told him I did not believe the eye could be saved, but we would try. Though the pupil was dilated I could not get any reflex. Instead I could only get a grayish yellow reflex, which indicated that the vitreous was infected, and that there would be suppuration. I introduced a magnet and removed the steel, and the eye cleared up. Now, in about half a year we have a cataract, but the patient sees light and projects very well. After removal of the cataract I can sincerely hope and expect that the patient will keep his eye and be able to see.

DR. WM. ELLERY BRIGGS, of Sacramento: I congratulate Dr. Barkan upon the results obtained in his series of cases. I have had a series of fortunate cases, and am now having a series of equally unfortunate cases. I think there is nothing in surgery more gratifying than the successful termination of an attempt at removal of a foreign body from the eye, and saving that eye. But still more gratifying have been one or two of my cases where I have saved almost perfect vision. In one case that I reported in the series of cases some years ago, the ultimate result was very good. After a year from the time of the operation I saw the patient a second time. The history of the case was somewhat as follows: He came from a neighboring State, with a note from an oculist who had been treating him for eight weeks for supposed rheumatic iritis. The man had iritis. After observing him for a day or two I examined his vitreous as carefully as possible, and came to the conclusion that there was a foreign body in the eye. I asked the man for a history of his case, and he said two or three days before he went to the doctor he had received a slight injury to the eye, but he did not believe there was any foreign body in it. The doctor examined his eye carefully, and in the future treatment saw no evidence of a foreign body being present. There was considerable yellowish reflex in the lower part of the vitreous, and he consulted two oculists in San Francisco, who thought that there was probably a foreign body. The doctors wrote in their note that they thought it was entirely improbable that the eye could be saved, and I really believed that myself. They said also it was worth an effort, and I made the effort, and was very successful in removing the foreign body; it was a small particle of steel. The man improved from that time on. He had extreme pain for weeks before this. After the foreign body was removed he had no pain. He returned home in three or four weeks. Before the operation he could count fingers at about three feet; before he went home he could count them at twenty feet. When I saw him later I do not now remember the exact amount of vision, but there was enough so that he could earn his living if the other eye should by any accident be lost. His occupation was that of a mechanic. That to me was one of the most gratifying results I have had. I have had one or two others that have attained more acute vision than in this case, but unfortunately they are not all so satisfactory. I have had quite a number of experiences that were very discouraging. When you are sure there is something in the eye there is nothing to do but to remove it. The great difficulty in this operation is in deciding whether it is best to attempt the operation. The operation itself is not so difficult as the importance of making an accurate diagnosis. In almost every case it is very difficult, and requires a good deal of skill in making the examination.

DR. J. D. ARNOLD, of San Francisco: I wish to mention one case which is of no especial importance except to point out the fact that one should not always be too much discouraged by a failure in the first place. The case that I refer to was where a small piece of steel had found its way into the eye. The patient was sent from the country, and, using the magnet enforced by some gravity cells, an attempt was made, making two incisions and introducing the magnet half a dozen times upon each side to get to the body. But no body was found, and after these experiments the family of the patient was not inclined to have the thing tried again. So the patient was let go home, with the advice that if the foreign body gave future trouble, and if there were any signs of inflammatory reaction, he should return. About seven months after that he returned with nothing apparently but a traumatic cataract, but with absolutely no inflammatory symptoms, and he assured me there had been none since the former failure to extract the foreign body from the eye. The cataract was operated upon, and on the posterior portion appeared a small portion of steel, and it was adherent to the lens, and came out with it. The question in such a case would be, what would have been best: to continue one's attempts to extract such a body—it was very small, not more than one-sixteenth of an inch in length,—or whether to follow the method adopted. I must express, not exactly as the result of my own judgment, but because the patient's family would not permit any more interference. It might seem to point in two directions: in the first place, that one should not be discouraged after repeated failure to extract, and it might again point the other way and prove to us that one should not make too many attempts, unless after one or two reasonable attempts there appears to be danger in continuing it, or where there is no possibility of either seeing the body in the eye by examination or of getting any index with the magnet as to its presence, whether it is withdrawn or not.

DR. BRIGGS, of Sacramento: I have a patient under observation at present who has a piece of steel in his lens. When he came to me the lens was at least two-thirds cataractous, and in nearly six months there is hardly a change in the cataract. The condition of the lens has not changed. The eye has never shown any inflammatory reaction to speak of. He never had any pain or bad symptoms. Vision has not increased, but I think it is best to let it alone unless it is thought best to remove the cataract and the steel at the same time.

DR. BARKAN, of San Francisco: It is the discussion of such practical and very important topics as these, and being in close feeling with surgery, that suggests to my mind the advisability of, perhaps, on future occasions, interpolating a few of these papers between the general transactions of the Society. I confess to being somewhat disappointed in seeing here this afternoon only a number of confreres, whom I am very glad to meet, and as it is the purpose of the State Medical Society to bring all branches of the profession in closer feeling, I would very humbly suggest for future guidance that we be given such an opportunity.

THE PRESIDENT: The same observation has been made by a member of the committee. The programme was arranged by taking special subjects, thinking it would be more in accordance with the desires of special practitioners. I think the paucity of members present this afternoon is accounted for entirely in the way that Dr. Barkan suggests. A great many feel that they are not interested in these particular subjects, when this one is particularly important to the general practitioner, and, as one of the officers, I fully agree with what the speaker has said. It would be better to interpolate subjects of this kind in the general programme.

Committee on Laryngology and Rhinology.—The report of this committee was read by the Chairman, W. A. MARTIN, of San Francisco, his subject being "Atrophic Rhinitis." He said: Our knowledge of the cause and means of curing this disease were defective. Among the theories of the origin of the trouble he mentioned a recent one, supported by Grünwald, that its source is in the accessory sinuses, and that one of the principal causes is carious bone in a sinus. Favorable results have been reported, by Bresgen, from removal of dead bone and washing out the affected sinuses. One learns to place little faith in new methods of cure after having tried many vaunted cures without success. All authorities agree that it develops in early life, and most of them believe that it never originates after puberty. Some believe it to be a later stage of hypertrophic rhinitis, but this theory is untenable. The author's experience with 22 cases observed during the past six months led him to believe that it is never unilateral, the inferior turbinated bodies are most affected, the middle turbinated may be found either normal, hypertrophied or atrophied, or there may be a mixed condition. The mucous membrane of the pharynx may show an atrophy extending from the vault of the epiglottis, or the atrophy may be limited to the upper part. The ostium of the eustachian tube is crater-like in appearance and can be easily seen through the lower meatus. The histological changes are a round-celled infiltration, showing the existence or preëxistence of an inflammatory process; a sparseness and a degeneration of the glands; the columnar ciliated epithelium is changed into a pavement epithelium. Changes are also noted in the deeper structures. Pathologists recognize the following forms of atrophy: senile atrophy, atrophy from loss of function, from pressure, from inanition, and neurotic atrophy. The author believes the only one deserving attention is neurotic atrophy. All the symptoms and histological changes point to a lesion in the trophic nerves, causing a retarded, or an arrest of, development. In regard to treatment, the author thinks that the task of restoring the nasal mucous membrane to a normal condition is like trying to make the hair grow on a bald head. The trouble must be classed among the incurable diseases which can only be alleviated. The treatment that had been most successful consists of methods that either retain or supply moisture, directly or indirectly, thus preventing the drying and crusting of the secretions, and at the same time facilitating their removal. The use of the cotton plugs of Gottstein, either dry or moistened with glycerine, act simply in a mechanical way by excluding the air and preventing withdrawal of moisture. Glycerine suppositories and bougies act by increasing the secretions and softening the crusts. Borax-glycerine in the form of a spray acts excellently in partial atrophy. Massage has been found inefficient.

DR. J. D. ARNOLD, of San Francisco: Dr. Martin's paper is, I think, a little more original than he himself believes. Atrophic rhinitis is a subject that has been so thoroughly ventilated in all the journals and in all medical societies, and the conclusions heretofore have been so unsatisfactory, especially as regards the suggested therapeutics, that it is an interesting subject for the specialist, though I fear the general practitioner cares very little about it, and heretofore every one has had to make his chapter on therapeutics about as sceptical as it is in this case with Dr. Martin. He says that all that can be done in such a case is to remove the secretions, and the result of the drying of the secretions, in the nose and in the pharnyx, which always constitutes the most unpleasant feature of the case. Up to date I fear that no treatment for atrophic rhinitis has ever succeeded in doing any more than he has just told us, to remove the most unpleasant features of the case. Dr. Martin says he believes atrophic rhinitis to be a developmental disease, and he also laid down the point that so far as his own observation is concerned, and that of a number of others whom he quoted, hypertrophic catarrh has never for its outcome an atrophic catarrh except in cases where it is traumatic. I do not believe that the facts in the case will substantiate his theory at all, and I can only say in so far as my own experience is concerned. that it has frequently been the case that there would be an atrophy of one portion of the schneiderian membrane and a hypertrophy at another. It is not an unusual thing to find hypertrophy and atrophy side by side in the same case. In so far as it is confined to one nostril, it is the experience of the authors, at least those that have been accessible to me, that it is not a very unusual thing to find it confined to one part of the nose strictly. It is not a very unusual thing to find it strictly confined to one of the turbinated bodies, and it is not unusual to find it affecting not only the whole nose, posterior and anterior, but also the pharynx, larynx and trachea. It is not very long ago, perhaps a year and a half, when some French writer, I cannot recall his name at present, announced to the world that he had discovered another form of laryngeal disease, and to the ordinary forms he added that of dry catarrh of the larynx, and in every single figure it agreed with atrophic catarrh in the larynx. There was that almost complete atrophy of the mucous membrane itself, and the characteristic yellowish and sometimes greenish scabs strongly adhering to the membrane, so strongly adherent that it is impossible almost for the patient either to void his secretions himself by voluntary cough, or to remove them in any way except by the use of some mechanical means in the larynx. In the eight cases which this doctor reported it was a direct extension from the ordinary atrophic rhinitis down the mucous membrane to the lower portion of the trachea. The theories which have been advanced to explain the condition of the membrane with one exception have been almost directly opposite to the conclusions brought out by Dr. Martin. The original idea that atrophic rhinitis was a disease dependent upon a rudimentary condition of the turbinate bones or to their absence was entirely negatived by the work that the doctor has quoted, and that portion of work that he quoted was entirely in the first volume, but in the second volume of the work, which appeared eight years after the first, the author very distinctly lays down these points: (1) That the two types of catarrh may be coexistent; (2) that he believed from anatomical investigations that the atrophic form is always a sequence of the hypertrophic form. I am very sorry to have to say that every writer upon the subject, with one exception alone, and that one just discovered or reported by Dr. Martin, holds exactly opposite theories to him upon every single point. Dr. Martin will make all of us reconsider our preconceived notions upon this point, and, perhaps, after all we will find all the other fellows wrong and Dr. Martin right. It is not impossible, I am sure.

DR. MARTIN, of San Francisco: It depends altogether on how the nervous lesion arises whether it is a peripheral neuritis. If a peripheral nerve is affected, it depends on the distribution of the nerves of which we know nothing at all. It may be that certain areas are affected and certain areas are not. As far as the extension of the atrophic rhinitis into the larynx is concerned, that is easily explained by the theory that the conditions that appear in the nose and in the naso-pharynx are simply the result of extension. In that way the mucous membrane is exposed, and there is no limit to the extent it might go. It may pass into the larynx or bronchi. The functions of the other areas are principally to supply moisture. As to the statement that atrophic rhinitis is a result of hypertrophic rhinitis, the author simply makes the statement that he believes such and such is the case. He also states that we know the beginning of the disease, and we know the end of the disease; the beginning of the disease being an inflammatory condition, and the end of the disease an atrophic condition. He says we are unfamiliar with whether it is a result of hypertrophy or not; he does not state absolutely, but it is simply his belief that it is so.

The Reasons for Supplementary Courses in the Treatment of Chronic Nasal Inflammation; the Times when these Courses should be Repeated, and their Number.—THOS. F. RUMBOLD, of San Francisco, read a paper upon this subject. The speaker pointed out the necessity of prolonged and repeated courses of treatment in these essentially chronic cases, without which a relapse was inevitable. The indications for subsequent courses of treatment, and the probable periods when these would be necessary, were discussed. He advocated informing patients when the time for subsequent treatment had arrived.. He had adopted this system for many years, as he found that patients were prone to forget the necessities of their condition until the local trouble had become sufficiently serious to compel attention.

DR. W. A. MARTIN, of San Francisco: We had a man in this hall who solicited patronage, and he was censured, and it seems to me this is the same thing, to send a letter to solicit a patient, warning him that he is in danger of having the disease repeated if he does not return to your office, instead of allowing him to use his own judgment, and go where and when he pleases. In this case I think the patient is the best judge of his own condition, and I think it is proper to allow him to select the time and place and the party who is to do the treating; and this sending out a letter, as Dr. Rumbold says he has done, I consider the merest quackery.

DR. RUMBOLD, of San Francisco: I think that is entirely uncalled for. It is a matter of judgment whether a man wants his patient to remain well whom he has once had under his care. I have sent these letters to physicians since 1872, as well as to my lay patients, and have never had the least objection to it at any time. I don't see what there is in it that should be in the least objectionable to any physician. As far as I know I have benefited my patient by reminding him of a very important fact if he wants to recover, and he may have forgotten it.

Executive Committee.—This committee, through its Chairman, HENRY GIBBONS, JR., of San Francisco, made the following report on the various matters that had been referred to it during the session. *Recommendations in President's address:* (1) Relative to the appointment of an officer to visit certain sections of the State, and perform the initial work of organizing local district societies; that the President, DR. G. L. SIMMONS, be requested to formulate a plan of carrying out this proposition, and to present it at the next meeting of the Society. (2) That a special committee of three be appointed to consider the reduction of fees by corporations and beneficiary societies, and to report at the next annual meeting. (3) That the President and Secretary be instructed to have published immediately the President's address, and to furnish a copy of the same to every regular practitioner and State and county official of California. *Woman's Medical Club:* In the matter of the application of the Woman's Medical Club of the Pacific, for recognition as a "local society," so that its members may become members of the State Society, the committee finds: (1) That the constitution of said club does not limit its membership to residents of the State of California, as required by our constitution. (2) That must be classed among the incurable diseases which can only be alleviated. The treatment that had been most successful consists of methods that either retain or supply moisture, directly or indirectly, thus preventing the drying and crusting of the secretions, and at the same time facilitating their removal. The use of the cotton plugs of Gottstein, either dry or moistened with glycerine, act simply in a mechanical way by excluding the air and preventing withdrawal of moisture. Glycerine suppositories and bougies act by increasing the secretions and softening the crusts. Borax-glycerine in the form of a spray acts excellently in partial atrophy. Massage has been found inefficient.

DR. J. D. ARNOLD, of San Francisco: Dr. Martin's paper is, I think, a little more original than he himself believes. Atrophic rhinitis is a subject that has been so thoroughly ventilated in all the journals and in all medical societies, and the conclusions heretofore have been so unsatisfactory, especially as regards the suggested therapeutics, that it is an interesting subject for the specialist, though I fear the general practitioner cares very little about it, and heretofore every one has had to make his chapter on therapeutics about as sceptical as it is in this case with Dr. Martin. He says that all that can be done in such a case is to remove the secretions, and the result of the drying of the secretions, in the nose and in the pharnyx, which always constitutes the most unpleasant feature of the case. Up to date I fear that no treatment for atrophic rhinitis has ever succeeded in doing any more than he has just told us, to remove the most unpleasant features of the case. Dr. Martin says he believes atrophic rhinitis to be a developmental disease, and he also laid down the point that so far as his own observation is concerned, and that of a number of others whom he quoted, hypertrophic catarrh has never for its outcome an atrophic catarrh except in cases where it is traumatic. I do not believe that the facts in the case will substantiate his theory at all, and I can only say in so far as my own experience is concerned. that it has frequently been the case that there would be an atrophy of one portion of the schneiderian membrane and a hypertrophy at another. It is not an unusual thing to find hypertrophy and atrophy side by side in the same case. In so far as it is confined to one nostril, it is the experience of the authors, at least those that have been accessible to me, that it is not a very unusual thing to find it confined to one part of the nose strictly. It is not a very unusual thing to find it strictly confined to one of the turbinated bodies, and it is not unusual to find it affecting not only the whole nose, posterior and anterior, but also the pharynx, larynx and trachea. It is not very long ago, perhaps a year and a half, when some French writer, I cannot recall his name at present, announced to the world that he had discovered another form of laryngeal disease, and to the ordinary forms he added that of dry catarrh of the larynx, and in every single figure it agreed with atrophic catarrh in the larynx. There was that almost complete atrophy of the mucous membrane itself, and the characteristic yellowish and sometimes greenish scabs strongly adhering to the membrane, so strongly adherent that it is impossible almost for the patient either to void his secretions himself by voluntary cough, or to remove them in any way except by the use of some mechanical means in the larynx. In the eight cases which this doctor reported it was a direct extension from the ordinary atrophic rhinitis down the mucous membrane to the lower portion of the trachea. The theories which have been advanced to explain the condition of the membrane with one exception have been almost directly opposite to the conclusions brought out by Dr. Martin. The original idea that atrophic rhinitis was a disease dependent upon a rudimentary condition of the turbinate bones or to their absence was entirely negatived by the work that the doctor has quoted, and that portion of work that he quoted was entirely in the first volume, but in the second volume of the work, which appeared eight years after the first, the author very distinctly lays down these points: (1) That the two types of catarrh may be coexistent; (2) that he believed from anatomical investigations that the atrophic form is always a sequence of the hypertrophic form. I am very sorry to have to say that every writer upon the subject, with one exception alone, and that one just discovered or reported by Dr. Martin, holds exactly opposite theories to him upon every single point. Dr. Martin will make all of us reconsider our preconceived notions upon this point, and, perhaps, after all we will find all the other fellows wrong and Dr. Martin right. It is not impossible, I am sure.

DR. MARTIN, of San Francisco: It depends altogether on how the nervous lesion arises whether it is a peripheral neuritis. If a peripheral nerve is affected, it depends on the distribution of the nerves of which we know nothing at all. It may be that certain areas are affected and certain areas are not. As far as the extension of the atrophic rhinitis into the larynx is concerned, that is easily explained by the theory that the conditions that appear in the nose and in the naso-pharynx are simply the result of extension. In that way the mucous membrane is exposed, and there is no limit to the extent it might go. It may pass into the larynx or bronchi. The functions of the other areas are principally to supply moisture. As to the statement that atrophic rhinitis is a result of hypertrophic rhinitis, the author simply makes the statement that he believes such and such is the case. He also states that we know the beginning of the disease, and we know the end of the disease; the beginning of the disease being an inflammatory condition, and the end of the disease an atrophic condition. He says we are unfamiliar with whether it is a result of hypertrophy or not; he does not state absolutely, but it is simply his belief that it is so.

The Reasons for Supplementary Courses in the Treatment of Chronic Nasal Inflammation; the Times when these Courses should be Repeated, and their Number.—THOS. F. RUMBOLD, of San Francisco, read a paper upon this subject. The speaker pointed out the necessity of prolonged and repeated courses of treatment in these essentially chronic cases, without which a relapse was inevitable. The indications for subsequent courses of treatment, and the probable periods when these would be necessary, were discussed. He advocated informing patients when the time for subsequent treatment had arrived. He had adopted this system for many years, as he found that patients were prone to forget the necessities of their condition until the local trouble had become sufficiently serious to compel attention.

DR. W. A. MARTIN, of San Francisco: We had a man in this hall who solicited patronage, and he was censured, and it seems to me this is the same thing, to send a letter to solicit a patient, warning him that he is in danger of having the disease repeated if he does not return to your office, instead of allowing him to use his own judgment, and go where and when he pleases. In this case I think the patient is the best judge of his own condition, and I think it is proper to allow him to select the time and place and the party who is to do the treating; and this sending out a letter, as Dr. Rumbold says he has done, I consider the merest quackery.

DR. RUMBOLD, of San Francisco: I think that is entirely uncalled for. It is a matter of judgment whether a man wants his patient to remain well whom he has once had under his care. I have sent these letters to physicians since 1872, as well as to my lay patients, and have never had the least objection to it at any time. I don't see what there is in it that should be in the least objectionable to any physician. As far as I know I have benefited my patient by reminding him of a very important fact if he wants to recover, and he may have forgotten it.

Executive Committee.—This committee, through its Chairman, HENRY GIBBONS, JR., of San Francisco, made the following report on the various matters that had been referred to it during the session. *Recommendations in President's address:* (1) Relative to the appointment of an officer to visit certain sections of the State, and perform the initial work of organizing local district societies; that the President, DR. G. L. SIMMONS, be requested to formulate a plan of carrying out this proposition, and to present it at the next meeting of the Society. (2) That a special committee of three be appointed to consider the reduction of fees by corporations and beneficiary societies, and to report at the next annual meeting. (3) That the President and Secretary be instructed to have published immediately the President's address, and to furnish a copy of the same to every regular practitioner and State and county official of California. *Woman's Medical Club:* In the matter of the application of the Woman's Medical Club of the Pacific, for recognition as a "local society," so that its members may become members of the State Society, the committee finds: (1) That the constitution of said club does not limit its membership to residents of the State of California, as required by our constitution. (2) That it contains no endorsement of the Code of Ethics. (3) That it does not make the possession of a certificate or license from the Board of Examiners a prerequisite to membership. The committee suggests to the Woman's Medical Club that it amend its constitution so that it shall conform to the constitution of this Society, in which event, there will be no objection to granting the recognition desired. *Reports of Secretary and Treasurer of the Board of Examiners*—Your committee has carefully examined the books, accounts and vouchers of the Secretary and Treasurer of the Board of Examiners, and find the same correct; also the accounts of the Committee on Publication. *Reports of Secretary and Treasurer*—The books, accounts and vouchers of the Secretary and Treasurer have also been carefully examined, and have been found correct. *Prize Essay*—Your committee finds no mention in the constitution and by-laws of the Society, of prize essays, but if custom makes precedent, no prize can be given for other than original work. Reference to the report of the Committee on Prize Essay in 1893, shows that the prize was refused in that year, upon this ground. According, therefore, to the opinion expressed by the majority of the Committee on Prize Essay, at the present session, no prize should be awarded this year. *Closing of Suburban Cemeteries*—That the resolution relative to the closing of suburban cemeteries, and the disposal of the dead, be adopted as the sense of the Society. *Committee on State Library*—That the Special Committee on State Library be continued. *Patent Medicine Advertising in the Journal of the American Medical Association*—The committee, while disapproving of the advertising in medical journals of patent and secret remedies, feels that this matter is in the hands of the Trustees of the Journal of the National Medical Association, who are answerable to the Association.

There being no further business the Society formally adjourned, to meet in Los Angeles, on the third Tuesday in April, 1896.

New Members.—At the different sessions the following were duly elected members of the Society:

Adelaide Brown,
C. F. Griffin,
C. G. Levison,
S. M.Rohr,
H. N. Rowell,
E. Rixford,
H. W. Strader,
F. W. Vowinckel,
M. H. Woolsey.

The following were reinstated:

J. A. McKee,
M. Regensburger.

THE EXHIBITION.

The exhibition, which for many years has been a feature of the State Society meetings, was held in the large banquet hall in the basement of the building in which the Society met. Space, light and ventilation were good, and the Committee of Arrangements had provided door-keepers, so that the usual cause of objection to this feature did not occur. Amongst the firms who had engaged space were the following:

Clinton E. Worden & Co., of San Francisco, were all pervasive, occupying a large amount of space and having, in fact, several exhibits. At one end of the hall they showed "malto-fer," their latest candidate for professional favor. This is a combination of malt with iron in such a form as to be acceptable to the most delicate stomach. In another section was shown a purified sea salt from the celebrated Salton sea. Apparently the most interesting feature of the exhibit was two of the firm's most attractive employes engaged in capsule making and capsule filling. The method of making capsules, both hard and elastic, and the filling of these with the more nauseous drugs and refractory essential oils, were satisfactorily demonstrated to a constant audience.

Duncombe & Co. exhibited their fracture bed and operating table, and also had something to say regarding their private ambulance service and the preparation of surgical dressings and preparatory work for operations.

W. M. Searby showed Veronica Mineral Water, a natural water for which he is the agent.

Ozonate Lithia Water was exhibited by E. G. Lyon & Co., the agents.

Jno. Wyeth & Bro., of Philadelphia, had a tasteful exhibit of their malt preparations.

Johnson & Enning, of 10 Post street, San Francisco, showed a large collection of medical books, embracing most of the standard text-books of modern medicine.

William R. Warner & Co., of Philadelphia, had a handsome exhibit of their specialties, as well as representatives of many of their standard preparations.

Clarke & Roberts, of Indianapolis, Ind., exhibited a surgical chair and operating table that could be used for gynecological as well as for general surgical work.

J. L. Hergeot, of San Francisco, exhibited Fleming's Medicinal Whisky and articles of the New York Medical Novelty Company's manufacture.

Horlick's Malted Milk, so long and favorably known on this coast, was on exhibition. This preparation, which possesses undoubted merits as an artificial food for infants, needs more pushing on this coast to place it where it rightfully belongs.

REVIEWS AND NOTICES.

A MANUAL OF HUMAN PHYSIOLOGY; PREPARED WITH SPECIAL REFERENCE TO STUDENTS OF MEDICINE. By Joseph H. Raymond, A.M., M.D., Professor of Physiology and Hygiene in the Long Island College Hospital, and Director of Physiology in the Hoagland Laboratory. With 102 illustrations in text and 4 full-page colored plates. Saunders' New Aid Series. Philadelphia: W. B. Saunders. pp 382. Price, $1.25.

This is probably the best of the recent short works on physiology, written specially for the medical student. The aim of the author has been to state only the main facts and principles of this branch of medicine, more than which it is impossible for a student to assimilate in the short time allotted to the subject in most medical schools. The book is clearly printed, liberally illustrated, and well arranged. The style of the author is concise, yet clear and interesting. As the book is written for the benefit of future practitioners, no opportunity is lost of giving practical and useful hints in connection with the explanations of the various physiological processes. All the subjects treated are considered from the standpoint of the latest discoveries and authorities. The chapter on nervous functions is particularly complete and valuable.

INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX, 1895. 13th year. New York: E. B. Treat. pp. 648. Price, $2.25.

In issuing the thirteenth volume of the Medical Annual the publishers state that they have been compelled to devote greater efforts towards condensation in view of the increasing volume of medical literature. An examination of the volume, however, shows that few, if any, of the important advances of the past year have been omitted. The dictionary of new remedies seems to include most of the drugs that have been put forward during the year, as well as new uses for some of the older ones. Two special chapters, on electro-therapeutics and on anti-microbic treatment, have been included. There is quite a lengthy chapter on eyesight and school life, which is of distinct value; accompanying it are a number of photo-engravings, which, probably owing to poor press work, are very badly brought out. The chapter on surgery of the gall-bladder is quite full. Mental defects are also dealt with at some length, and advances in intestinal surgery are reviewed and illustrated. There is a brief article by Dr. Armand Ruffer, on the treatment of diphtheria by antitoxic serum, and the volume closes with a review of the advances in sanitary science for the past year.

THE PHYSICIAN'S WIFE, AND THE THINGS THAT PERTAIN TO HER LIFE. By Ellen M. Firebaugh. With 44 photo-engravings of sketches taken from real life. Philadelphia: The F. A. Davis Co. pp. xii–186.

It would seem proper that this book, written by a doctor's wife, should be reviewed by a doctor's wife, and we endeavored to bring about this fitness of things. While several "wives" have read the little volume, all have denied their fitness for the task, and its criticism must come from the doctor himself. It is certainly true, as the authoress indicates, that the wife of the doctor practising in the smaller towns and villages is far more a part of his professional life than she who dwells in the big cities or larger towns. The wife of the latter man knows but little of the real hard work and hardship that are the lot of her less favored sister, and she can hardly appreciate the sacrifices and self-denials that go to make up the sum of lives of these truly good and altogether indispensable women. No one can read the many incidents in these pages without recognizing how true to nature they all are. Many are but repetitions of our daily lives and trials and worries, and the troublesome cases and the unpleasant patients and the "bad pays" are too well known. There is just one feature in the book that demands criticism, and that is the statement that when ill the doctor's wife must of necessity choose her husband as her physician. This is certainly not the general practice of the profession unless where circumstances render the services of another, and competent, practitioner impossible. In country districts this may sometimes be the case, but we feel certain that few physicians care to assume the responsibility of the lives of loved ones when they can be placed in trustworthy hands. The little volume can be read and enjoyed by medical men and medical women, and by many doctor's wives, who will find therein numerous familiar incidents.

TRANSACTIONS OF THE ANTISEPTIC CLUB. Reported by Albert Abrams, a member of the San Francisco medical profession. Illustrated. New York: E. B. Treat. pp. 206. Price, cloth, $1.75.

Whatever may be said or thought of this book, it is undeniably clever. There is much in it that is interesting and much that is amusing. Some of the wit is a trifle far-fetched and a few of the facetiæ not as keen as such should be. The whole, to be appreciated to its fullest, must be read and digested by the medical reader, and he, reading between the lines, will find, at times, keen sarcasm and well-turned satire. It is susceptible of criticism, and it bears criticism, and bears it well. Robert Louis Stevenson's tribute to the profession, than which nothing truer and nothing more complimentary has ever been written, seems out of place in this work, while the author's and the publisher's prefaces are singularly in keeping with it. Criticism in detail of such a book is hardly possible, but favorable mention of several subjects is due to their treatment. The chapter on testimonials is good; some of the examples are true to life, others are a little far-fetched, and in others the wit is almost coarse. The discussions in medical societies are dwelt on in a manner that shows familiarity with the offenses charged. The remarks of the author on the climate of California, that last resort for the destitute in literature, are good, and his allusion to the execrable, though bracing, article that San Francisco furnishes will be recognized as true to life. The chapter on organic secretions is good, and with that on medicine, in 1945, is amongst the best in the book. Perhaps the keenest satires are contained in the "Classification of Homeopaths," and in some observations on "Scientific Perverts." We have omitted all reference to the illustrations, believing that they also had better have been omitted. On the whole, the book is worth reading; it is even worth buying, and this cannot be said of many books of nowadays.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. A yearly report of the progress of the general sanitary sciences throughout the world. Edited by Charles E. Sajous, M.D., and seventy associate editors. Illustrated with chromo-lithographs, engravings and maps. Issue of 1894; sixth year. Philadelphia: The F. A. Davis Co.

The editor again regrets the tardy appearance of the Annual for 1894. Great efforts had been made to insure its prompt appearance, but, as is usual on these occasions, while many were prompt, a few were still tardy. We believe the editor is fully justified in the increased satisfaction that he has expressed with this issue of so ponderous an undertaking. On looking through the volumes carefully, and going over the more practical sections thoroughly, the increased care in the selection of material and its arrangement is very evident. Perhaps the most marked feature noticeable at a cursory glance, is the improvement in the illustrations and the better judgment shown in their selection. Many of the chromo-lithographs are very valuable, not only as illustrations, but for subsequent reference. The engravings are also good, and have been placed to the best advantage. One small picture on page G 75, of volume I, deserves reproduction in every daily paper as an object lesson on vaccination. Originally taken from the *Lancet*, it represents a hardly perceptible case of small-pox in a vaccinated child of 11 years, and a fatal case of confluent small-pox in a brother of the first child, age 3½ years. The photograph was taken on the 13th day of the attack of the first child, and the 10th of that of the second. Dr. Hoisholt's case of word-blindness is reproduced and illustrated on page A 15, of volume II. The chapter on surgical dressings and antiseptics, page 1, volume III, is a very useful feature in these days of rapid evolution in surgical *technique*. The review of therapeutics in volume IV, is as usual excellent, and for the general practitioner is, perhaps, the most useful feature of the Annual Considering the vast amount of literature annually reviewed for this work it is not difficult to understand how some articles may be overlooked. We must, however, confess to some surprise at observing the omission, under the head of injuries to the eyes and foreign bodies therein, of W. E. Briggs' series of twenty-one cases of removal of metallic fragments from the eye by the electro-magnet. One series of ten cases is given, but the above, which was accurately illustrated and which contains some excellent cases, has not been included. Taking it as a whole, we are constrained to admit that the increased care shown in every section of the editorial departments, and the very liberal expenditure of the publishers, tends to render the Annual not only most useful, but more difficult to dispense with than might be said of former issues.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held April 2, 1895, the following were granted certificates to practise medicine in this State:

Oswald H. Beckman, Astoria, Or.; Jefferson Med. Coll., Pa., Mar. 29.'84.
W. L. Beebe, Los Angeles; Med. Coll. of Ohio, Mar.,'73; Bellevue Hosp. Med. Coll., Mar. 1,'76.
S. M. Benner, Monterey; Rush Med. Coll., Ill., Feb. 25,'79.
John M. Benton, San Francisco; Med. Dept. Univ. of Maryland, April 16,'90.
James S. Colder, Los Angeles; Harvard Med. Coll., Mass., Mar. 7,'66.
J. F. Christal (Lieu Certificate), Santa Cruz; Cooper Med. Coll., Cal., Dec. 4,'91.
Samuel A. Ellis, Los Angeles; Coll. Phys. and Surg., Chicago, Ill., Feb. 23,'86.
E. L. Grossman, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
F. F. Johnson, San Francisco. Cooper Med. Coll. Cal., Dec. 6,'94.
Duncan McLean, Sacramento; Univ. Toronto, Canada, May 6,'91.
Albert R. Nicholson, Los Angeles: Med. Dept. Univ. of Michigan, June 26,'93.
C. Quevli, Tacoma, Wash.; Minnesota Hosp. Coll., Minn., Feb. 27,'85.
W. G. Tucker, San Francisco; Med. Dept. Univ. of Mich., June 29,'93.
Charles Daniel Ware, Colfax; Med. Coll. of Ohio, Mar. 7,'88.
Gustavus E. Werber, Los Angeles; Columbian Univ., D.C., May 5,'94.
Zŭdzensé, Los Angeles; Rush Med. Coll., Ill., Mar. 31,'91.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army, from March 20, 1895, to April 20, 1895.

The journey performed by Captain Euclid B. Frick, Assistant Surgeon, from Fort Townsend to Seattle, Wash., and return, on December 20, 1894, on public business in connection with the examination of recruits, in obedience to instructions from these headquarters, dated April 5, 1892, is confirmed. Par. 1, S. O. 51, Dept. of the Columbia, April 13, 1895.

By direction of the President, the retirement from active service, April 18, 1895, of Colonel Joseph R. Smith, Assistant Surgeon-General, is announced.

Leave of absence for two months, to take effect on being relieved from duty at Fort Huachuca, Arizona, is granted Captain Rudolph G. Ebert, Assistant Surgeon.

Captain Rudolph G. Ebert, Assistant Surgeon, relieved from duty at Fort Huachuca, Arizona, and ordered to Fort Columbus, New York, for duty at that post.

Captain Paul Shillock, Assistant Surgeon, relieved from duty at Fort Wingate, New Mexico, and ordered to Madison Barracks, New York, for duty at that post, to relieve Capt. Robert B. Benham, Assistant Surgeon.

Captain Benham, on being relieved by Captain Shillock, will report in person for duty at Fort Wingate, New Mexico.

Captain Euclid B. Frick, Assistant Surgeon, will be relieved from duty at Fort Townsend, Washington, to take effect upon the expiration of his present leave of absence, and will then report for duty at Presidio of San Francisco, California, relieving Capt. Chas. Wilcox, Assistant Surgeon.

Captain Wilcox, upon being thus relieved, will report for duty at the U. S. Military Academy, West Point, New York.

Official List of Changes in the Medical Corps U. S. Navy (Pacific Station) from March 20, 1895, to April 20, 1895.

C. T. Bagg, Assistant Surgeon, detached from U. S. Naval Hospital, Mare Island, Cal., and ordered to U. S. coast-defence steamer "Monterey," at Acapulco, Mexico.

Surgeon Joseph G. Ayers, now attached to U. S. S. "Olympia," to examination for promotion to Medical Inspector.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service (District of the Pacific) from March 20, 1895 to April 20, 1895.

John Godfrey, Surgeon, detailed as Chairman of Board for physical examination of candidates for revenue cutter service.

C. H. Gardner, Assistant Surgeon, to proceed to Angel Island Quarantine Station, for temporary duty, March 4, 1895. Detailed as Recorder of Board for physical examination of candidates for revenue cutter service.

J. H. Oakley, Assistant Surgeon, detailed for duty on Revenue Steamer "Rush."

Past Assistant Surgeon J. C. Perry, to proceed to Portland, Or., and assume command of service. April 5, 1895.

C. H. Gardner, Assistant Surgeon, granted leave of absence for fifteen days. March 22, 1895.

ITEMS.

Dr. E. Calderon has removed from 607 to 526 Sutter street, San Francisco, Cal.